

# Start Calculation!

Teacher Manual  
Class-5



## Chapter-1

### Exercise - 0.1

**1. Write following number in figures:**

- (a) 15,37,607      (b) 85,80,405  
(c) 4,476,297      (d) 7,00,973  
(e) 57,808,882

**2. Write following number in words using number system:**

- (a) six lakh seventy nine thousand and seven hundred eight six  
(b) Eighteen lakh eighty six thousand one hundred six  
(c) Seventy six lakh forty six thousand and ten  
(d) Ninety lakh eight thousand eight hundred seventy nine  
(e) nineteen lakh seventy six thousand nine hundred thirty five

**3. write the following number in word using international system:**

- (a) Seven million for hundred thirty six thousand seven hundred twenty three.  
(b) Nineteen million five hundred eight thousand seven hundred eighty six.  
(c) Thirty million eight hundred seventy three thousand and eighteen.  
(d) Sixty eight million six hundred eighty three thousand seven hundred sixty eight

- (e) Seventy five million three hundred sixty thousand eight hundred forty one

**4. Write the place value of encircled digits:**

- (a) 800      (b) 30

**5. Write in expanded form:**

- (a)  $7000000 + 300000 + 40000 + 3000 + 6$   
(b)  $1000000 + 100000 + 60 + 3$   
(c)  $900000 + 60000 + 8000$   
(d)  $2000000 + 600000 + 10000 + 9000 + 800 + 30 + 4$

**6. Write in short form:**

- (a) 9070687      (b) 5830389  
(c) 950328      (d) 3876328  
(e) 69332

**7. Write the Roman number for each of the following :**

- (a) LXVII      (b) XXXVII  
(c) C      (d) XCVI  
(e) LXXXIX      (f) L

**8. Write the Hindu Arabic numerals for the following:**

- (a) 99      (b) 96      (c) 68  
(d) 59      (e) 84      (f) 98

**9. Find the difference between the place value and face value of 9 in 7869743:**

8991

**10. Find the difference between the greatest number of 6 digits and smallest number of 6 digits:**

$$999999 - 100000 = 899999$$

**11. Find the difference of place value of 8 in 8346872:**

**12. Write the greatest and smallest number of 5 digits by using the following digits:**

(a) 97630, 30679

(b) 98210, 10289

**13. Compare the following numbers and put  $>$ ,  $<$  or  $=$ :**

(a) 796436  $[ < ]$  796536

(b) 79083  $[ < ]$  79084

(c) 472892  $[ = ]$  472892

(d) 227436  $[ < ]$  227596

(e) 6943892  $[ > ]$  6933892

(f) 786832  $[ < ]$  788829

**14. Write a decreasing order:**

(a) 63,56,897  $<$  63,66,887  $<$   
73,83,996  $<$  78,78,671

(b) 47,15,606  $<$  47,50,606  $<$   
74,05,606  $<$  96,73,606

(c) 96,73,638  $<$  96,73,308  $<$   
96,73,803  $<$  96,73,826

(d) 40,04,004  $<$  40,04,400  $<$   
40,40,004  $<$  40,40,400

(e) 46,48,327  $<$  46,38,738  $<$   
46,83,738  $<$  48,36,732

**15. Write a decreasing order:**

(a) 92,58,348  $>$  55,50,600  $>$   
52,25,525  $>$  25,52,225

(b) 82,46,700  $>$  76,72,420  $>$   
72,56,5557  $>$  43,56,845

(c) 53,50,823  $>$  35,50,6287  $>$   
35,05,429  $>$  19,56,835

(d) 89,60,824  $>$  74,83,625  $>$   
30,92,028  $>$  27,50,600

(e) 32,22,600  $>$  26,34,986  $>$   
23,62,602  $>$  22,23,600

**16. Add the following:**

(a) 
$$\begin{array}{r} 8326536 \\ 288369 \\ + \quad 74886 \\ \hline 8689791 \end{array}$$

(b) 
$$\begin{array}{r} 7643897 \\ 2586784 \\ + 3816136 \\ \hline 14046817 \end{array}$$

**17. Subtract the following:**

(a) 
$$\begin{array}{r} 5249861 \\ - 2799867 \\ \hline 2449994 \end{array}$$

(b) 
$$\begin{array}{r} 7696000 \\ - 4787986 \\ \hline 2908014 \end{array}$$

**18. Multiply the following:**

(a) 
$$\begin{array}{r} 53692 \\ \times 89 \\ \hline 483228 \\ 428536 \times \\ \hline 4778588 \end{array}$$

(b) 
$$\begin{array}{r} 73640 \\ \times 786 \\ \hline 441840 \\ 589120 \times \\ 515480 \times \times \\ \hline 578881040 \end{array}$$

**19. Add the following:**

(a) 
$$\begin{array}{r} 4578447 \div 15 \\ 305229 \text{ Q} \\ 15 \overline{) 4578447} \\ \underline{45} \phantom{00} \\ 78 \phantom{00} \\ \underline{75} \phantom{00} \\ 34 \phantom{00} \\ \underline{30} \phantom{00} \\ 44 \phantom{00} \\ \underline{30} \phantom{00} \\ 147 \phantom{00} \\ \underline{135} \phantom{00} \\ 12 \text{ R} \end{array}$$

(b)  $602082 \div 67$

$$\begin{array}{r} 8986 \text{ Q} \\ 67 \overline{) 602082} \\ \underline{536} \phantom{00} \\ 660 \phantom{00} \\ \underline{603} \phantom{00} \\ 578 \phantom{00} \\ \underline{536} \phantom{00} \\ 422 \phantom{00} \\ \underline{402} \phantom{00} \\ 20 \end{array}$$

20. Find the missing numerals:

(a)  $\frac{6}{7} = \frac{[24]}{28}$  (b)  $\frac{11}{18} = \frac{88}{[144]}$

(c)  $\frac{13}{14} = \frac{52}{[56]}$  (d)  $\frac{15}{17} = \frac{[75]}{85}$

(e)  $\frac{12}{13} = \frac{108}{[117]}$  (f)  $\frac{16}{19} = \frac{[80]}{95}$

21. Cut the correct symbol  $>$  or  $<$  in the given boxes:

(a)  $\frac{5}{8} [ < ] \frac{9}{8}$  (b)  $\frac{16}{20} [=] \frac{16}{20}$

(c)  $\frac{6}{12} [ > ] \frac{3}{12}$  (d)  $\frac{7}{24} [ < ] \frac{8}{24}$

(e)  $\frac{9}{22} [ < ] \frac{12}{22}$  (f)  $\frac{9}{14} [ > ] \frac{3}{14}$

22. Find the equivalent fraction of  $\frac{26}{30}$  with ::

(a)  $\frac{52}{60}$  (b)  $\frac{156}{180}$

(c)  $\frac{78}{90}$  (d)  $\frac{156}{180}$

23. Write the fraction of the following:

- (a) 36 - 1, 2, 3, 4, 6, 9, 12, 18, 36  
 (b) 105 - 1, 3, 5, 7, 15, 21, 35, 105  
 (d) 100 - 1, 2, 4, 5, 10, 20, 25, 50, 100

24. Write the first 8 multiples of the following:

- (a) 6 - 6, 12, 18, 24, 30, 36, 42, 48  
 (b) 13 - 13, 26, 39, 52, 65, 78, 91, 104  
 (c) 25 - 25, 50, 75, 100, 125, 150, 175, 200  
 (d) 36 - 36, 72, 108, 144, 180, 216, 252, 288

25. Write all prime numbers form 1 to 100:

- 3, 5, 7, 11, 13, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 67, 71, 73, 79, 83, 89, 97

26. Arrange the following in ascending order:

(a)  $\frac{3}{10} < \frac{4}{10} < \frac{5}{10} < \frac{6}{10} < \frac{9}{10}$

(b)  $\frac{7}{8} < \frac{3}{8} < \frac{5}{8} < \frac{10}{8} < \frac{12}{8}$

27. Arrange the following in descending order:

(a)  $\frac{8}{2} > \frac{8}{9} > \frac{8}{11} > \frac{8}{13} > \frac{8}{14}$

(b)  $\frac{7}{8} > \frac{5}{8} > \frac{4}{8} > \frac{3}{8} > \frac{7}{8}$

28. Add the following:

(a)  $\frac{5}{8} + \frac{3}{8} + \frac{6}{8}$   
 $= \frac{5+3+6}{8} = \frac{7}{4}$

(b)  $\frac{12}{19} + \frac{5}{19} + \frac{7}{19} + \frac{9}{19}$   
 $= \frac{12+5+7+9}{19} = \frac{33}{19}$

29. Subtract the following:

(a)  $\frac{12}{10} - \frac{3}{10} = \frac{12-3}{10} = \frac{9}{10}$

(b)  $\frac{7}{8} - \frac{4}{8}$   
 $= \frac{7-4}{8} = \frac{3}{8}$

**30. Convert in to improper fraction:**

(a)  $3\frac{4}{9} = \frac{31}{9}$       (b)  $12\frac{5}{10} = \frac{125}{10}$

(c)  $22\frac{4}{26} = \frac{576}{26}$

**31. Convert in to mixed fraction:**

(a)  $\frac{12}{9} = 1\frac{3}{9}$       (b)  $\frac{30}{14} = 2\frac{2}{14}$

(c)  $\frac{32}{28} = 1\frac{4}{28}$

**32. Write the following fraction as a decimal:**

(a)  $\frac{92}{10} = 9.2$       (b)  $\frac{726}{100} = 7.26$

(c)  $\frac{838}{1000} = 0.838$

(d)  $\frac{9}{1000} = 0.009$

**33. Write the following as a fraction :**

(a)  $0.56 = \frac{14}{25}$       (b)  $3.49 = \frac{349}{100}$

(c)  $0.6 = \frac{3}{50}$       (d)  $34.8 = \frac{174}{5}$

**34. Convert the following as directed:**

(a) 6 kg 76 g in to grams = 6076 gram

(b) 6 mm 8 dam in to meters = 680 meters

(c) 3 kl 75 l in to liters = 3075 l

(d) 7980 g in to kg and g = 7 kg 980 g

a. one kg = 1000 g

So, 6 kg change in gm  $1000 \times 6 = 6000 + 76 = 6076$  gm

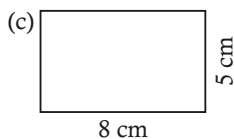
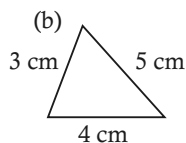
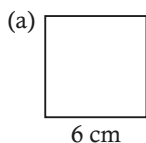
b. 1 mm = 100 dm

So,  $6 \times 100 = 600$

c. 1 kl = 1000 l

So,  $3 \text{ kl} = 1000 \times 3 = 3000 + 75 \text{ l} = 3075 \text{ l}$

**35. Find the perimeter of the following figures:**



(a) Perimeters -

(c) Perimeters -

(b) Perimeters -

**36. Find the duration between:**

(a) 8:20 AM to 10:40 PM

$$10.40$$

$$- 8.20$$

$$\hline 2.20$$

(b) 7:15 PM to 9:30 AM

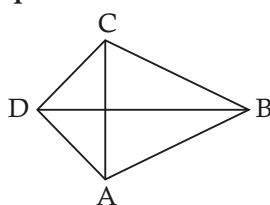
13 hours 40 minutes

**37. Which of the following are leap year:**

(a) 1992 Yes      (b) 2011 No

(c) 2015 No      (d) 2015 Yes

**38. Write the name of sides, vertices and diagonals of the following quadrilaterals:**



**39. Find the radius of the circles whose diameters are:**

(a) radius =  $\frac{R}{2} = \frac{7}{2} = 3.5$  cm

(b)  $\frac{19}{2} = 9.5$  cm

(c)  $\frac{26}{2} = 13$  cm

40. Find the diameter of the circle having radius:

(a) 8 cm

$$\text{Diameter} = r \times 2$$

$$= 8 \times 2 = 16$$

(b)  $= 6 \times 2 = 12$

(c)  $8.3 \times 2 = 16.6$

41. Suppose your school started at 7:40 AM and get over at 1 :30 PM find the working hours of your school:

1 : 30 PM

7 : 40 AM

0

42. What time will be:

(a) 2 hours 45 minutes after 8 : 45 PM ?

11:39 PM

(b) 3 hours 54 minutes after 11:56 AM ?

3:50 PM

## Chapter-2

### Exercise - 2.1

1. Write in words:

(a) 28,45,975 - Twenty eight lack forty five thousand nine hundred seventy five

(b) 85,15,078 - Eight five lack fifty thousand seventy eight

(c) 9,54,70,420 - Nine crore fifty four lack seventy thousand four hundred twenty

(d) 8,67,67,674 - Eight crore sixty seven lack sixty seven thousand six hundred seventy four

(e) 93,42,56,478 - Ninety crore forty two lack fifty six thousand four hundred seventy eight

2. Write in figure:

(a) 56,63,702 (b) 87,90,670

(c) 80,90,90,921 (d) 6,07,00,008

(e) 76,03,89,845

3. Place commas at the appropriate place in each the following according to Indian number system to separate the periods:

(a) 34,56,789 (b) 46,58,679

(c) 89,64,554 (d) 9,57,602

(e) 8,34,78,808 (f) 2,83,495

(g) 58,38,47,625

(h) 74,80,35,295

4. Draw the value chart and write the digits under the correct place in each of the following:

|   | TC | C | T.L | L | TTh | Th | H | T | O |
|---|----|---|-----|---|-----|----|---|---|---|
| a |    |   | 6   | 5 | 6   | 7  | 8 | 9 | 0 |
| b |    |   | 4   | 6 | 5   | 8  | 6 | 7 | 4 |
| c |    |   | 9   | 2 | 1   | 1  | 4 | 5 | 6 |
| d |    |   | 8   | 5 | 6   | 7  | 6 | 0 | 2 |
| e |    | 9 | 3   | 4 | 7   | 8  | 8 | 0 | 8 |
| f |    | 2 | 1   | 8 | 3   | 4  | 9 | 5 | 8 |
| g | 5  | 8 | 3   | 8 | 4   | 7  | 6 | 2 | 5 |
| h | 6  | 4 | 8   | 0 | 3   | 5  | 2 | 9 | 5 |

5. Write in expanded form:

(a)  $6000000 + 800000 + 40000 + 3000 + 200 + 30 + 4$

(b)  $9000000 + 700000 + 10000 + 5000 + 900 + 80 + 7$

(c)  $80000000 + 9000000 + 800000 + 7$

(d)  $70000000 + 6000000 + 500000 + 90000 + 8000 + 600 + 50 + 4$

(e)  $500000000 + 60000000 + 40000 + 3000 + 80 + 1$

**6. Write in short form:**

- (a) 755432      (b) 9008036  
 (c) 8660306    (d) 7605432  
 (e) 800867008

**7. Write the place value of 6 in 68,32,879:**

60,00,000

**8. Find the difference between the place value and face value of 8 in 7,82,62,345:**

Place value of 8 – 8,000000

Face value of 8 – –8

7999992

**9. Find the difference between the of the both the 6 in 65, 78, 94, 691:**

The 6 in 65,78,94,691

= 600000000 – 600

= 59,99,99400

**10. Write the greatest and smallest number of 5 digits by using the digits 9, 7, 0, 2, and 5:**

Greatest : 97520

Smallest : 20579

**11. Write in increasing order:**

- (a)  $86,46,987 < 87,45,786 < 96,34,789 < 96,43,786 < 96,45,786 < 96,45,789 < 96,53,887 < 98,82,789$   
 (b)  $45,11,028 < 45,30,002 < 45,30,003 < 45,30,030 < 45,11,028 < 45,30,002 < 45,30,003 < 45,33,030$

**12. Write in decreasing order:**

- (a)  $78,38,870 > 78,33,838 > 78,33,786 > 78,28,888 > 73,24,600 > 72,70,858 > 72,20,048 > 72,00,024$   
 (b)  $66,78,678 > 66,18,508 > 28,92,111 > 26,80,030 > 26,65,592 > 24,50,088 > 17,75,669 > 16,56,962$

**13. You have to deposit 45,96,07,007 in state banked India. Write this amount in words:**

Rupees forty five crore ninety six lack seven thousand seven

**Exercise - 2.2****1. Arrange the following numerals in India place value chart and then write with commas at the write place:**

|   | TC | C | T.L | L | TTh | Th | H | T | O |
|---|----|---|-----|---|-----|----|---|---|---|
| a |    |   | 9   | 6 | 2   | 8  | 3 | 7 | 8 |
| b |    |   | 2   | 6 | 7   | 1  | 2 | 4 | 5 |
| c |    |   | 8   | 4 | 2   | 3  | 6 | 8 | 5 |
| d |    | 2 | 3   | 0 | 2   | 4  | 7 | 0 | 8 |
| e |    | 7 | 3   | 0 | 8   | 0  | 2 | 6 | 7 |
| f |    | 8 | 9   | 6 | 3   | 4  | 7 | 2 | 8 |
| g |    | 3 | 6   | 2 | 9   | 0  | 0 | 0 | 4 |
| h | 5  | 6 | 3   | 6 | 2   | 0  | 2 | 8 | 4 |

**2. Arrange the following numerals in International place value chart and then write with commas at the write place:**

|   | HM | TM | M | HTh | TTh | Th | H | T | O |
|---|----|----|---|-----|-----|----|---|---|---|
| a |    |    | 4 | 7   | 8   | 5  | 7 | 2 | 8 |
| b |    |    | 2 | 8   | 9   | 2  | 0 | 2 | 3 |
| c |    | 3  | 2 | 8   | 9   | 0  | 2 | 4 | 5 |
| d |    | 3  | 4 | 5   | 3   | 9  | 2 | 2 | 9 |
| e |    | 9  | 5 | 2   | 5   | 5  | 6 | 7 | 8 |
| f |    | 2  | 6 | 2   | 8   | 2  | 5 | 2 | 8 |
| g |    | 8  | 2 | 3   | 4   | 5  | 6 | 7 | 8 |
| h | 6  | 7  | 5 | 4   | 8   | 7  | 6 | 5 | 2 |

**3. Write the following numerals in the Indian system:**

- (a) 8953086 :- Eight nine lack fifty three thousand eight six  
 (b) 2844683 :- Twenty eight lack forty four thousand six hundred eight three

(c) 5255252 :- Fifty two lack fifty five thousand two hundred fifty two

(d) 23530768 :- Two crore thirty five lack thirty thousand seven hundred sixty eight

(e) 23864393 :- Two crore thirty eight lack sixty four thousand three hundred ninety three

(f) 50498542 :- Five crore four lack ninety eight thousand five hundred forty two

(g) 65280258 :-

(h) 247806039 :- Twenty four crore seven four crore seventy eight lack six thousand thirty nine

**4. Write the following numerals in words in the International system:**

(a) 8628378 :- Eight million six hundred twenty eight thousand twenty three

(b) 2792023 :- Two million two hundred fifty five thousand twenty three

(c) 5255252 :- Five millions two hundred fifty five thousand two hundred fifty two

(d) 30284708 :- Thirty million two hundred eight four thousand seven hundred eight

(e) 73075267 :- Seventy three million seventy five thousand two hundred two hundred seven

(f) 2623528 :- Two million six hundred twenty three thousand five hundred twenty eight

(g) 7588258 :- Seven million five hundred eight thousand two hundred fifty eight

(h) 265487652 :- Two hundred sixty five million four hundred eight seven thousand six hundred fifty two

**5. Write the following in Indian system in figure:**

(a) 63,89,608 (b) 46,83,809

(c) 80,70,060 (d) 10,00,1001

(e) 83,04,02,006

**6. Write the following in International system in figure:**

(a) 41,882,607 (b) 1,766,515

(c) 9,800,086 (d) 43,408,666

(e) 9,909,099

**7. Write in figure and words in Indian and International system:**

(a) 10,00,000 (Ten lack)

1,000,000 (One million)

(b) 99,99,999 (Ninety nine lack ninety thousand nine hundred ninety nine)

9,999,999 (Nine million nine hundred ninety nine thousand nine hundred ninety nine)

(c) 1,00,00,000 (One crore)

10,000,000 (Ten lack)

(d) 9,99,99,999 (Nine crore ninety nine lack ninety thousand nine hundred ninety)

99,999,999 (Ninety nine million nine hundred ninety nine thousand nine hundred ninety nine)

(e) 100,000,000 (Ten crore)

100,000,000 One hundred million

(f) 99,99,99,999 (Ninety nine

crore ninety nine lack ninety nine thousand nine hundred ninety nine)

999,999,999 (Nine hundred ninety nine million nine hundred ninety nine thousand nine hundred ninety nine)

### Exercise - 2.3

#### 1. Find the place value of bold digits in each numerals:

- (a) 60,00,000 (b) 9,00,000  
(c) 2,00,00,000 (d) 6,000  
(e) 50,000 (f) 70,00,000  
(g) 50,00,000 (h) 4,00,000

#### 2. Find the place and face value of bold digits in each numerals:

- (a) 9,00,00,000 (b) 7,00,000,7  
(c) 80,000,8 (d) 30,000,3

#### 3. Find the difference between place value and face value of 7 in 81,72,910:

Place value of 7 – 70000

Face value of 7 – 7

69993

#### 4. Find the difference between place value of 4 and 8 in the numerals 2,65,04,978:

Place value of 4 – 4000

Face value of 8 – 8

3992

#### 5. Find the difference between place value of 9 in 92.45,765 and 29,45,765:

Place value of 9 in

92,45,765 - 9000000

Face value of 9 in

29,45,765 - 900000

8100000

#### 6. Write in short form:

- (a) 39,64,265 (b) 70,30,905  
(c) 9,80,08,002 (d) 8,03,04,038  
(e) 43,02,006

#### 7. Write in expanded form:

- (a) 6000000 + 200000 + 80000 + 300 + 70 + 8  
(b) 20000000 + 700000 + 90000 + 2000 + 20 + 3  
(c) 20000000 + 20000 + 50000 + 5000 + 200 + 50 + 2  
(d) 3000000 + 20000 + 4000 + 700 + 8  
(e) 7000000 + 700000 + 30000 + 200 + 60 + 7  
(f) 2000000 + 600000 + 20000 + 2000 + 500 + 20 + 8  
(g) 8000000 + 20000 + 5000 + 800 + 80 + 9  
(h) 60000000 + 5000000 + 400000 + 80000 + 7000 + 600 + 50 + 2

#### 8. Write the successor of each of the following numbers:

- (a) 62,80,378 (b) 27,90,203  
(c) 42,37,686 (d) 30,82,899  
(e) 63,08,279 (f) 34,76,729  
(g) 90,00,895 (h) 61,02,839

#### 9. Write the predecessor of each of the following numbers:

- (a) 56,78,89,432 (b) 8,96,39,999  
(c) 98,54,398 (d) 1,99,99,999  
(e) 78,79,697 (f) 54,62,985  
(g) 44,67,897 (h) 48,84,744

#### 10.

| S. No. | Predecessor | Number       | Successor    |
|--------|-------------|--------------|--------------|
| a      | 2,59,38,900 | 2,59,38,901  | 2,59,38,902  |
| b      | 47,78,998   | 47,78,999    | 47,79,000    |
| c      | 2,59,37,998 | 2,59,37,888  | 2,59,38,000  |
| d      | 9,99,99,999 | 10,00,00,000 | 10,00,00,001 |
| e      | 99,99,998   | 99,99,999    | 1,00,00,000  |
| f      | 99,997      | 99,998       | 99,999       |
| g      | 77,08,989   | 77,08,999    | 77,09,000    |
| h      | 99,99,999   | 1,00,00,000  | 1,00,00,001  |
| i      | 78,89,598   | 78,89,599    | 78,89,599+1  |
| j      | 3465998+1   | 34,66,000    | 34,66,001    |

### Exercise - 2.4

**1. Find the place value of bold digits in each numerals:**

- (a) 86,43,789 [ < ] 86,54,598
- (b) 45,83,768 [ = ] 45,83,768
- (c) 80,96,654 [ < ] 82,98,483
- (d) 78,95,898 [ < ] 78,95,899
- (e) 7,35,65,783 [ < ] 7,55,65,783
- (f) 43,56,54,486 [ > ] 43,54,54,486
- (g) 8,36,00,765 [ < ] 8,36,76,765
- (h) 13,82,99,000 [ < ] 13,82,99,001

**2. Write in increasing order:**

- (a) 89,90,009 < 89,90,094 < 89,90,490 < 89,90,940 < 89,90,949
- (b) 50,60,000 < 50,60,100 < 50,60,200 < 50,60,300 < 50,60,400
- (c) 67,68,699 < 72,37,496 < 72,55,321 < 12,64,792 < 76,01,333
- (d) 2,13,05,007 < 2,30,50,700 < 2,30,60,709 < 2,28,07,050 < 2,80,70,503
- (e) 3,15,177 < 3,15,48,275 < 3,15,69,874 < 3,15,84,725 < 3,15,98,175

**3. Write in decreasing order:**

- (a) 32,97,590 > 32,88,710 > 32,57,989 > 32,57,965 > 32,57,954
- (b) 5,38,76,942 > 5,38,67,429 > 5,38,42,679 > 5,38,42,669 > 5,38,24,976
- (c) 69,84,578 > 3,69,48,874 > 3,67,48,754 > 3,67,47,488 > 3,67,42,754

- (d) 9,67,01,131 > 9,67,01,112 > 9,66,71,418 > 9,65,592 > 9,66,56,592 > 9,66,56,592
- (e) 3,77,18,906 > 3,68,72,890 > 47,81,961 > 3,47,18,990 > 47,18,906

**4. Encircle the greatest number and under line the smallest number:**

- (a) Greatest - 2,34,56,998  
Smallest - 90,68,504
- (b) Greatest - 19,45,240  
Smallest - 12,24,133
- (c) Greatest - 19,99,616  
Smallest - 19,89,643
- (d) Greatest - 13,42,456  
Smallest - 12,23,516
- (e) Greatest - 19,80,623  
Smallest - 18,46,745

**5. Write the greatest and smallest number 7 digits by using the digits 6, 9, 5, 1, 0, 8 and 7:**

9876510; 1056789

**6. Write the successor of largest number of 7 digits:**

99,99,999

**7. Write the predecessor of smallest number of 8 digits:**

1,00,00,000

**8. Write the greatest and smallest number of 8 digits by using the digits 6, 0, 9, 1, 5, 5 and 8 also find their sum and difference:**

Greatest - 9,8765,40

Smallest 1,02,56,789

Difference - 8,85,08,421

Sum - 10,90,21,999

### Exercise - 2.5

**1. Round off the following number to the nearest 10:**

- (a) 45,78,350    (b) 98,34,590

- (c) 2,88,920 (d) 3,02,690  
 (e) 78,83,320 (f) 7,93,240  
 (g) 78,80,010 (h) 88,88,880

**2. Round of the following number to the nearest 100:**

- (a) 23,57,000 (b) 67,83,800 (c) 9,89,000  
 (d) 23,45,700 (e) 8,49,900 (f) 74,36,700  
 (g) 2,43,600 (h) 38,78,400

**3. Round of the following number to the nearest 1000:**

- (a) 63,57,000 (b) 37,84,000 (c) 89,89,000 (d) 93,46,000  
 (e) 78,50,000 (f) 94,37,000 (g) 62,43,000 (h) 86,78,000

**4. Which of the following can be rounded of Yes or No:**

- (a) No (b) Yes (c) No (d) No (e) No

**Exercise - 2.6**

**1. Write the following Hindu Arabic numerals in to Roman numbers:**

- (a) LIX (b) LXXXIIC (c) CXCVII (d) CLIX  
 (e) CCCX (f) CCCCXV (g) DLXXII (h) DCLXXV

**2. Write the following Roman numbers in to Hindu Arabic numerals:**

- (a) 380 (b) 805 (c) 99 (d) 256  
 (e) 57 (f) 33 (g) 79 (h) 420

**3. Which of the following numerals are meaningless?**

- (a) Meaningless (b) Meaningless (c) True  
 (d) True (e) True (f) True

**4. Write the Roman numerals form 1 to 100:**

|      |       |        |         |        |       |        |         |          |       |
|------|-------|--------|---------|--------|-------|--------|---------|----------|-------|
| I    | XI    | XXI    | XXXI    | XL I   | LI    | LXI    | LXXI    | LXXXI    | XCI   |
| II   | XII   | XXII   | XXXII   | XLII   | LII   | LXII   | LXXII   | LXXXII   | XCII  |
| III  | XIII  | XXIII  | XXXIII  | XLIII  | LXII  | LXIII  | LXXIII  | LXXXIII  | XCII  |
| IV   | XIV   | XXIV   | XXXIV   | XLIV   | LIV   | LXIV   | LXXIV   | LXXXIV   | XCIII |
| V    | XV    | XXV    | XXXV    | XLV    | LV    | LXV    | LXXV    | LXXXV    | XCIV  |
| VI   | XVI   | XXVI   | XXXVI   | XLVI   | LVI   | LXVI   | LXXVI   | LXXXVI   | XCV   |
| VII  | XVII  | XXVII  | XXXVII  | XLVII  | LVII  | LXVII  | LXXVII  | LXXXVII  | XCVI  |
| VIII | XVIII | XXVIII | XXXVIII | XLVIII | LVIII | LXVIII | LXXVIII | LXXXVIII | XCVII |
| IX   | XIX   | XIX    | XXXIX   | XLIX   | LIX   | LXIX   | LXXIX   | LXXXIX   | XCIII |
| X    | XX    | XXX    | XXXL    | XL     | LX    | LXXX   | LXXX    | XC       | C     |

## Chapter-3

### Exercise - 3.1

#### 1. Add the following:

$$\begin{array}{r} \text{(a)} \quad 7, 38, 26, 460 \\ + 3, 86, 87, 798 \\ \hline 11, 25, 14, 258 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 6, 56, 86, 962 \\ + 5, 48, 98, 396 \\ \hline 12, 05, 85, 358 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 8, 86, 96, 532 \\ + 5, 83, 85, 968 \\ \hline 14, 70, 82, 500 \end{array}$$

$$\begin{array}{r} \text{(d)} \quad 26, 36, 46, 567 \\ + 38, 52, 96, 830 \\ \hline 64, 89, 43, 397 \end{array}$$

$$\begin{array}{r} \text{(e)} \quad 36, 25, 32, 786 \\ + 55, 69, 83, 837 \\ \hline 91, 95, 16, 623 \end{array}$$

$$\begin{array}{r} \text{(f)} \quad 83, 76, 48, 236 \\ + 19, 68, 35, 839 \\ \hline 1, 03, 48, 44, 075 \end{array}$$

$$\begin{array}{r} \text{(g)} \quad 36, 28, 86, 506 \\ + 7, 38, 98, 789 \\ \hline 76, 86, 696 \\ \hline 44, 44, 71, 991 \end{array}$$

$$\begin{array}{r} \text{(h)} \quad 59, 35, 83, 796 \\ + 28, 66, 76, 808 \\ \hline 5, 22, 39, 616 \\ \hline 93, 25, 00, 220 \end{array}$$

$$\begin{array}{r} \text{(i)} \quad 76, 28, 28, 230 \\ + 25, 19, 06, 539 \\ \hline 28, 26, 25, 254 \\ \hline 129, 73, 60, 023 \end{array}$$

#### 2. Find the sum:

$$\begin{array}{l} \text{(a)} \quad 7,36,56,786 + 28,36,72,638 + \\ \quad 36,72,56,880 = 72,45,86,304 \end{array}$$

$$\begin{array}{l} \text{(b)} \quad 29,88,362 + 8,22,86,970 + \\ \quad 28,65,38,996 = 37,18,14,328 \end{array}$$

$$\begin{array}{l} \text{(c)} \quad 28,28,32,524 + 36,73,52,686 \\ \quad + 32,72,65,332 = 97,74,50,542 \end{array}$$

$$\begin{array}{l} \text{(d)} \quad 20,26,00,328 + 22,39,53,524 \\ \quad + 76,834 = 66,30,686 \end{array}$$

### Exercise - 3.2

$$\begin{array}{l} \text{1. (a) Difference is} = 753688 \\ \text{Smaller number} = 2836787 \\ \text{Greater number} = \underline{1,03,73,575} \end{array}$$

$$\begin{array}{l} \text{(b) A number} = 263846 \\ \text{Exceeds number} = 898375 \\ \hline 35,37,121 \end{array}$$

$$\begin{array}{l} \text{(c) The men in city} = 7985636 \\ \text{Women} = 7026839 \\ \text{Children} = 2686930 \end{array}$$

$$\text{Total population} = \underline{1,76,99,405}$$

$$\begin{array}{l} \text{4. Produced in year} = 28, 86, 868 \\ \text{Next year pro.} = 68, 54, 362 \\ \hline \text{Total production} = \underline{9741230} \end{array}$$

$$\begin{array}{l} \text{5. Earned in 2017} = 2389897 \\ \text{Earned in 2018} = 4065360 \\ \text{Earned in 2019} = 4370530 \\ \hline \underline{10825787} \end{array}$$

$$\begin{array}{l} \text{6. Roni purchase land} = ₹3689600 \\ \text{Register} = ₹79630 \\ \text{Construction} = ₹70880650 \\ \hline \text{Total} = ₹\underline{10857880} \end{array}$$

$$\begin{array}{l} \text{7. Earned in 2009} = 1672850 \\ \text{Earned in 2010} = 2085450 \\ \text{Earned in 2012} = 5768570 \\ \hline \underline{9526870} \end{array}$$

$$\begin{array}{l} \text{8. Greatest no. 7 digits} = 9999999 \\ \text{Greatest no. 8 digits} = 99999999 \\ \text{Smallest no. 6 digits} = 100000 \\ \hline \text{Total} = \underline{110099998} \end{array}$$

$$\begin{array}{l} \text{9. Greatest number} = 9876542 \\ \text{Smaller number} = +2456789 \\ \hline \text{Total} = \underline{12333331} \end{array}$$

$$\begin{array}{l} \text{10. Wheat bag} = 8275650 \\ \text{Rice bag} = 5695350 \\ \text{Pulses in godown} = 6977560 \\ \hline \text{Total bag} = \underline{20948560} \end{array}$$

**Exercise - 3.3****1. Subtract the following:**

$$\begin{array}{r} 8573426 \\ - 5894878 \\ \hline 2678548 \end{array}$$

$$\begin{array}{r} (b) \quad 7839460 \\ - 3888578 \\ \hline 3950882 \end{array}$$

$$\begin{array}{r} (c) \quad 9658436 \\ - 788988 \\ \hline 8869448 \end{array}$$

$$\begin{array}{r} (d) \quad 9000000 \\ - 6567948 \\ \hline 2432052 \end{array}$$

$$\begin{array}{r} (e) \quad 7206288 \\ - 4587898 \\ \hline 2618390 \end{array}$$

$$\begin{array}{r} (f) \quad 6050403 \\ - 2839487 \\ \hline 2839487 \end{array}$$

$$\begin{array}{r} (g) \quad 57384978 \\ - 49898898 \\ \hline 7486080 \end{array}$$

$$\begin{array}{r} (h) \quad 86328786 \\ - 38868997 \\ \hline 47459789 \end{array}$$

$$\begin{array}{r} (i) \quad 27368838 \\ - 8978958 \\ \hline 18389880 \end{array}$$

**2. Identify minuend and subtrahend. Also find the difference of two:**

$$\begin{array}{l} (a) \text{ Minuend} - 89, 63, 432 \\ \text{Subtrahend } 6783433 \\ \text{Difference} = 8963432 - 6783433 = 21, 79, 999 \end{array}$$

$$\begin{array}{l} (b) \text{ Minuend} - 96, 65, 870 \\ \text{Subtrahend} - 95, 93, 900 \\ \text{Difference} = 96, 65, 870 - 95, 93, 900 = 2, 71, 880 \end{array}$$

$$(c) \text{ Minuend} - 27, 86, 002$$

$$\text{Subtrahend} - 27, 86, 000$$

$$\text{Difference} = 27, 86, 002 - 27, 86, 000 = 2$$

$$(d) \text{ Minuend} - 88, 88, 888$$

$$\text{Subtrahend} - 8, 88, 888$$

$$\text{Difference} = 88, 88, 888 - 8, 88, 888 = 0$$

**3. Subtract the following:**

$$\begin{array}{r} (a) \quad 8932678 \\ - 7965432 \\ \hline 967246 \end{array}$$

$$\begin{array}{r} (b) \quad 9653269 \\ - 6723963 \\ \hline 2929306 \end{array}$$

$$\begin{array}{r} (c) \quad 37439359 \\ - 27896573 \\ \hline 9542786 \end{array}$$

$$\begin{array}{r} (d) \quad 95000000 \\ - 94789270 \\ \hline 210730 \end{array}$$

**4. Write the greatest and smallest number of 8 digits 4, 6, 0, 9, 7, 8, 2, 3 also find the difference of two number:**

$$\text{Greatest number} = 98764320$$

$$\text{Smallest number} = 20344789$$

$$= 7, 84, 17, 531$$

**Exercise - 3.4****1. First city; 5, 16, 706**

$$6989766$$

$$6473060$$

$$\hline 516706$$

**2. Two number - 7868690**

$$\text{One number} - 5879889$$

$$\text{Another number} - 19, 88, 801$$

**3. Turnover 2008 - 78896543**

$$\text{Increased in 2009} - 96788896$$

$$\text{Increased sales} - 9678896$$

$$- 7886543 = 1, 78, 92, 353$$

**4. 10000000**

$$- 4569278$$

$$\hline 9, 54, 30, 722$$

5. Candidates appeared = 2879685  
 Pass candidates = 967345  
 Unqualified student =  $\underline{1912340}$
6. Winning candidates received the vote = 75,43,609  
 Votes margin = 783892  
 Candidates received =  $\underline{6759717}$
7. C.P of wood = ₹ 7883869  
 And other mat = ₹ 3679586  
 Money employer = ₹ 3679586  
 Total C.P =  $\underline{15243041}$   
 S.P of bats = ₹ 23600000  
 C.P of bats = ₹ 15243041  
 $\underline{83,56,959}$

So he gain on this resaction  
 = ₹ 83,56,959

8.  $\begin{array}{r} 7,11,52,570 \\ 69,45,780 \\ \hline 64206790 \end{array}$

The find number

9.  $1,69,58,740 - (14,62,580 + 17,58,960)$   
 =  $1,69,58,740 - (3,221,540)$   
 = 13,737,200
10.  $(62,15,490 + 38,92,457) - (62,15,490 - 38,92,457)$   
 =  $10,107,947 - 2,323,033$   
 = 7,784,914

### Exercise - 3.5

#### 1. Find the following products:

- (a)  $342 \times 10 = 3420$   
 (b)  $7436 \times 10 = 74360$   
 (c)  $89836 \times 10 = 898360$   
 (d)  $735 \times 100 = 73500$   
 (e)  $8386 \times 100 = 838600$   
 (f)  $79832 \times 100 = 7983200$   
 (g)  $682 \times 1000 = 682000$   
 (h)  $4360 \times 1000 = 4360000$   
 (i)  $46738 \times 1000 = 46738000$

#### 2. Find the following products:

- (a)  $736 \times 50$   
 =  $736 \times 5 \times 10$   
 =  $(736 \times 5) \times 10$   
 =  $3680 \times 10 = 36800$
- (b)  $9378 \times 60$   
 =  $9378 \times 6 \times 10$   
 =  $(9378 \times 6) \times 10$   
 =  $9376 \times 6 = 56268$   
 =  $56268 \times 10 = 562680$
- (c)  $8328 \times 80$   
 =  $8328 \times 8 \times 10$   
 =  $(8328 \times 8) \times 10$   
 =  $66624 \times 10 = 666240$
- (d)  $964 \times 700$   
 =  $964 \times 7 \times 100$   
 =  $(964 \times 7) \times 100$   
 =  $6748 \times 100 = 674800$
- (e)  $7364 \times 900$   
 =  $7364 \times 9 \times 100$   
 =  $(7364 \times 9) \times 100$   
 =  $66236 \times 100 = 6623600$
- (f)  $3426 \times 800$   
 =  $3426 \times 8 \times 100$   
 =  $(3426 \times 8) \times 100$   
 =  $27408 \times 100 = 2740800$
- (g)  $232 \times 3000$   
 =  $232 \times 3 \times 1000$   
 =  $(232 \times 3) \times 1000$   
 =  $696 \times 1000 = 696000$
- (h)  $3456 \times 4000$   
 =  $3456 \times 4 \times 1000$   
 =  $(3456 \times 4) \times 1000$   
 =  $13824 \times 1000 = 13824000$
- (i)  $2030 \times 9000$   
 =  $2030 \times 9 \times 1000$   
 =  $(2030 \times 9) \times 1000$   
 =  $18270 \times 1000 = 18270000$

**3. Find the product by using suitable grouping:**

- (a)  $3 \times 960 \times 6$   
 $= 960 \times (6 \times 3)$   
 $= 960 \times 18 = 17280$
- (b)  $5 \times 896 \times 6$   
 $= 896 \times (5 \times 6)$   
 $= 896 \times 30 = 26880$
- (c)  $736 \times 36 \times 5$   
 $= 736 \times (36 \times 5)$   
 $= 736 \times 180 = 132480$
- (d)  $60 \times 732 \times 5$   
 $= 732 \times (60 \times 5)$   
 $= 732 \times 300 = 219600$
- (e)  $6 \times 786 \times 40$   
 $= 786 \times (6 \times 40)$   
 $= 786 \times 240$   
 $= 188640$
- (f)  $9 \times 893 \times 236$   
 $= 893 \times (9 \times 236)$   
 $= 893 \times 2124$   
 $= 1896732$
- (g)  $5 \times 36 \times 836$   
 $= 836 \times (36 \times 5)$   
 $= 836 \times 180$   
 $= 1896732$
- (h)  $7 \times 596 \times 60$   
 $= 596 \times (40 \times 6)$   
 $= 596 \times 420$   
 $= 150480$
- (i)  $27 \times 898 \times 6$   
 $= 898 \times (6 \times 27)$   
 $= 898 \times 162$   
 $= 145476$

**4. Fill in the blanks:**

- (a)  $2686 \times 8432 = 8432 \times \underline{2686}$
- (b)  $54678 \times \underline{10} = 546780$
- (c)  $354 \times \underline{100} = 35400$
- (d)  $\underline{786} \times 1000 = 786000$
- (e)  $836 \times \underline{10} = 8360$
- (f)  $\underline{0} \times 836 = 0$

**Exercise - 3.6**

**1. Find the following products:**

- (a) 
$$\begin{array}{r} 73235 \\ \times 36 \\ \hline 439410 \\ 219705 \times \\ \hline 2636460 \end{array}$$
- (b) 
$$\begin{array}{r} 83906 \\ \times 49 \\ \hline 755154 \\ 235624 \times \\ \hline 3111394 \end{array}$$
- (c) 
$$\begin{array}{r} 839863 \\ \times 86 \\ \hline 5037178 \\ 6718904 \times \\ \hline 72226218 \end{array}$$
- (d) 
$$\begin{array}{r} 46838 \\ \times 253 \\ \hline 140514 \\ 234190 \times \\ 93676 \times \times \\ \hline 11850014 \end{array}$$
- (e) 
$$\begin{array}{r} 73957 \\ \times 306 \\ \hline 443742 \\ 00000 \times \\ 22186 \times \times \\ \hline 22630842 \end{array}$$
- (f) 
$$\begin{array}{r} 70065 \\ \times 567 \\ \hline 490455 \\ 420390 \times \\ 350325 \times \times \\ \hline 39726855 \end{array}$$
- (g) 
$$\begin{array}{r} 4325 \\ \times 2353 \\ \hline 12975 \\ 21625 \times \\ 12975 \times \times \\ 8650 \times \times \times \\ \hline 10176725 \end{array}$$

$$\begin{array}{r}
 \text{(h)} \quad \begin{array}{r} 5673 \\ \times 3062 \\ \hline 11346 \\ 34038 \times \\ 0000 \times \times \\ 1619 \times \times \times \\ \hline 17310726 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(i)} \quad \begin{array}{r} 7308 \\ \times 2308 \\ \hline 58464 \\ 0000 \times \\ 21924 \times \times \\ 14616 \times \times \times \\ \hline 16866864 \end{array}
 \end{array}$$

**2. Multiply the following by writing multiplier in expanded form:**

- (a)  $7365 \times 35$   
 $= 7365 \times (30+5)$   
 $= 7365 \times 30 + 7365 \times 5$   
 $= 220950 + 36825 = 257$
- (b)  $3406 \times 53$   
 $= 3406 \times 50 + 3406 \times 3$   
 $= 170300 + 10218 = 180518$
- (c)  $9654 \times 76$   
 $= 9654 \times 70 + 9654 \times 6$   
 $= 675780 + 57924 = 33704$
- (d)  $2806 \times 232$   
 $= 2806 \times 200 + 2806 \times 30 + 2806 \times 2$   
 $= 561200 + 84180 + 5612$   
 $= 650992$
- (e)  $73625 \times 300 + 73625 \times 30 + 73625 \times 2$   
 $= 22087500 + 2208750 + 147250 = 2443500$
- (f)  $80068 \times 436$   
 $= 400 + 30 + 6$   
 $= 80068 \times 400 + 80068 \times 30 + 80068 \times 6$

$$= 32027200 + 2402040 + 480408 = 34909648$$

$$\begin{array}{l}
 \text{(g)} \quad 2732 \times 352 \\
 = 300 + 50 + 2 \\
 = 2732 \times 300 + 2732 \times 50 + 2732 \times 2 \\
 = 819600 + 136600 + 5464 \\
 = 961660
 \end{array}$$

$$\begin{array}{l}
 \text{(h)} \quad 8498 \times 305 \\
 = 200 + 50 + 3 \\
 = 8498 \times 200 + 8498 \times 50 + 8498 \times 3 \\
 = 1699600 + 424900 + 25494 \\
 = 2149994
 \end{array}$$

$$\begin{array}{l}
 \text{(i)} \quad 83929 \times 305 \\
 = 300 + 5 \\
 = 83929 \times 300 + 83929 \times 5 \\
 = 25178700 + 419645 \\
 = 25598345
 \end{array}$$

### Exercise - 3.7

- Cost of a pen stand is = ₹ 86  
Find the cost of = 2936  
Cost =  $2936 \times 86 = ₹ 252496$
- The employers in one branch = 63  
In 2777 branches =  $6777 \times 63 = 174951$
- One bus carry = 790 passenger  
The passenger in 684 =  $684 \times 790 = 540360$
- The cost of one bicycle is = ₹ 4376  
The cost of 296 bicycle =  $4376 \times 296 = ₹ 1295296$
- One student tuition fee = ₹ 785  
The fee of 1650 student =  $1650 \times 785 = ₹ 1295250$
- The Sheela one day earning = ₹ 570  
One year 365 earning =  $570 \times 365 = 208050$

7. One day produces = 5690  
3 days produces =  $5690 \times 3$   
= 17070
8. The cost of one washing machine  
= 20365 ₹  
The cost of ₹ 2565 machine =  
 $20365 \times 2565 = 52175130$  ₹
9. The greatest 6 digits = 999999  
The smallest 5 digits = 10000
10. In one bundle of copper wire =  
790 meters  
In 2898 bundle =  $2898 \times 790$   
= 2289420 meters

### Exercise - 3.8

1. Divide the following and find quotient and remainder:

(a)  $5737 \div 85$  (b)  $92371 \div 47$

$$\begin{array}{r} 675 \text{ Q} \\ 85 \overline{) 57437} \\ \underline{510} \\ 643 \\ \underline{595} \\ 487 \\ \underline{425} \\ 62 \text{ R} \end{array} \quad \begin{array}{r} 1965 \text{ Q} \\ 47 \overline{) 92371} \\ \underline{47} \\ 453 \\ \underline{423} \\ 307 \\ \underline{282} \\ 251 \\ \underline{235} \\ 16 \text{ R} \end{array}$$

(c)  $65537 \div 29$  (d)  $68599 \div 57$

$$\begin{array}{r} 2156 \text{ Q} \\ 29 \overline{) 62537} \\ \underline{58} \\ 45 \\ \underline{29} \\ 163 \\ \underline{145} \\ 187 \\ \underline{174} \\ 13 \text{ R} \end{array} \quad \begin{array}{r} 1203 \text{ Q} \\ 57 \overline{) 68599} \\ \underline{57} \\ 115 \\ \underline{114} \\ 199 \\ \underline{171} \\ 28 \text{ R} \end{array}$$

(e)  $486271 \div 66$  (f)  $921777 \div 34$

$$\begin{array}{r} 7367 \text{ Q} \\ 66 \overline{) 486271} \\ \underline{462} \\ 242 \\ \underline{198} \\ 447 \\ \underline{396} \\ 511 \\ \underline{462} \\ 49 \text{ R} \end{array} \quad \begin{array}{r} 27111 \text{ Q} \\ 34 \overline{) 921777} \\ \underline{68} \\ 241 \\ \underline{238} \\ 37 \\ \underline{34} \\ 37 \\ \underline{34} \\ 37 \\ \underline{34} \\ 3 \text{ R} \end{array}$$

(g)  $592164 \div 123$  (h)  $659393 \div 185$

$$\begin{array}{r} 4814 \text{ Q} \\ 123 \overline{) 592164} \\ \underline{492} \\ 1001 \\ \underline{984} \\ 176 \\ \underline{123} \\ 534 \\ \underline{492} \\ 42 \text{ R} \end{array} \quad \begin{array}{r} 3564 \text{ Q} \\ 185 \overline{) 659392} \\ \underline{555} \\ 1043 \\ \underline{0925} \\ 1139 \\ \underline{1110} \\ 792 \\ \underline{740} \\ 52 \text{ R} \end{array}$$

(i)  $741156 \div 154$

$$\begin{array}{r} 4812 \text{ Q} \\ 154 \overline{) 741156} \\ \underline{616} \\ 1251 \\ \underline{1232} \\ 195 \\ \underline{154} \\ 416 \\ \underline{308} \\ 108 \text{ R} \end{array} \quad \begin{array}{r} 38929 \text{ Q} \\ 175 \overline{) 6712666} \\ \underline{525} \\ 1562 \\ \underline{1400} \\ 1626 \\ \underline{1575} \\ 516 \\ \underline{350} \\ 1666 \\ \underline{1575} \\ 52 \text{ R} \end{array}$$

$$(k) 7865607 \div 195$$

$$\begin{array}{r} 40336 \text{ Q} \\ 195 \overline{) 7865607} \\ \underline{780} \phantom{00} \\ 656 \phantom{00} \\ \underline{585} \phantom{00} \\ 710 \phantom{00} \\ \underline{585} \phantom{00} \\ 1257 \phantom{00} \\ \underline{1170} \phantom{00} \\ 87 \text{ R} \end{array} \quad \begin{array}{r} 6382 \text{ Q} \\ 385 \overline{) 2457305} \\ \underline{2310} \phantom{00} \\ 1473 \phantom{00} \\ \underline{1155} \phantom{00} \\ 3180 \phantom{00} \\ \underline{3080} \phantom{00} \\ 1005 \phantom{00} \\ \underline{770} \phantom{00} \\ 1666 \phantom{00} \\ \underline{1575} \phantom{00} \\ 235 \text{ R} \end{array}$$

## 2. Find the dividend when:

$$(a) \text{ Divisor} = 542 \text{ Quotient} = 1486 \text{ and Remainder} = 240$$

$$\begin{aligned} \text{Dividend} &= \text{Divisor} \times \\ &\text{Quotient} + \text{Remainder} \\ 542 \times 1486 + 240 &= 80 \end{aligned}$$

$$(b) \text{ Divisor} = 169 \text{ Quotient} = 4962 \text{ and Remainder} = 121$$

$$169 \times 4962 + 121 = 838699$$

$$(c) \text{ Divisor} = 298 \text{ Quotient} = 3758 \text{ and Remainder} = 0$$

$$298 \times 3758 + 0 = 119884$$

$$(d) \text{ Divisor} = 965 \text{ Quotient} = 5402 \text{ and Remainder} = 625$$

$$965 \times 5402 + 625 = 5213555$$

## 3. Divide by checking your answer:

$$(a) 6825437 \text{ by } 291$$

$$\begin{array}{r} 23455 \text{ Q} \\ 291 \overline{) 6825437} \\ \underline{582} \phantom{00} \\ 1005 \phantom{00} \\ \underline{873} \phantom{00} \\ 1324 \phantom{00} \\ \underline{1164} \phantom{00} \\ 1603 \phantom{00} \\ \underline{1455} \phantom{00} \\ 1487 \phantom{00} \\ \underline{1455} \phantom{00} \\ 32 \text{ R} \end{array}$$

$$D \times Q + R$$

$$23455 \times 291 + 32 = 6825437$$

$$(b) 4006529 \text{ by } 416$$

$$D \times Q + R$$

$$\begin{array}{r} 9631 \text{ Q} \\ 416 \overline{) 4006529} \\ \underline{3744} \phantom{00} \\ 2625 \phantom{00} \\ \underline{2496} \phantom{00} \\ 1292 \phantom{00} \\ \underline{1248} \phantom{00} \\ 449 \phantom{00} \\ \underline{416} \phantom{00} \\ 33 \text{ R} \end{array}$$

$$9631 \times 416 + 33 = 4006529$$

$$(c) 3250080 \text{ by } 168$$

$$\begin{array}{r} 19345 \text{ Q} \\ 168 \overline{) 32500080} \\ \underline{168} \phantom{00} \\ 1570 \phantom{00} \\ \underline{1512} \phantom{00} \\ 580 \phantom{00} \\ \underline{504} \phantom{00} \\ 768 \phantom{00} \\ \underline{672} \phantom{00} \\ 960 \phantom{00} \\ \underline{840} \phantom{00} \\ 120 \text{ R} \end{array}$$

$$D \times Q + R$$

$$19345 \times 168 + 120 = 3250080$$

$$(d) 7259100 \text{ by } 672$$

$$\begin{array}{r} 10802 \text{ Q} \\ 672 \overline{) 7259100} \\ \underline{672} \phantom{00} \\ 5391 \phantom{00} \\ \underline{5376} \phantom{00} \\ 1500 \phantom{00} \\ \underline{1344} \phantom{00} \\ 33 \text{ R} \end{array}$$

$$D \times Q + R$$

$$10802 \times 672 + 156 = 7259100$$

### Exercise - 3.9

#### 1. Solve the following problems:

Two number is – 1456350

First number is – 365

Other number is –  $1456350 \div 365$   
 $= 3990$

2. One packet hold = 250 pencils  
 117250 pencils hold =  $117250 \div 250 = 469$

3. divisor is = 325 quotient = 16825  
 remainder = 36

Divisor  $\times$  quotient + remainder  
 $= 325 \times 16825 + 36$   
 $= 5468161$

4. Total ₹ distributed = 9268280  
 Total student 3044 Each student  
 find amount =  $926828 \div 3044$   
 $= 3405$

5. 185 toys cost ₹ 994560  
 One toys cost –  $994560 \div 185$   
 $= ₹ 5376$

6. Total = ₹ 8654575  
 Total student = 515  
 One student get rupees  
 $= 8654475 \div 515$   
 $= ₹ 16805$

7. Product two number = 950916  
 Second number = 327  
 First number =  $950916 \div 327$   
 $= 2908$

8. The cost of 6351 kg wheat = ₹ 101616  
 The cost of 1 kg =  $601616 \div 6351$   
 $= ₹ 16$

9. In one pecked wire = 795840 m  
 Each bundles contains = 225 m  
 Made the bundle =  $795840 \div 225$   
 $= 3537$  bundles left wire = 15

$$\begin{array}{r} 3537 \text{ Q} \\ 225 \overline{) 795840} \\ \underline{675} \phantom{0} \\ 1208 \phantom{0} \\ \underline{1125} \phantom{0} \\ 834 \phantom{0} \\ \underline{675} \phantom{0} \\ 1590 \phantom{0} \\ \underline{1575} \phantom{0} \\ 33 \text{ R} \end{array}$$

10. The cost of 392 bags = ₹ 179144  
 One bag cost =  $179144 \div 392$   
 $= 457$

### Exercise - 3.10

#### 1. Simplify the following:

(a)  $17 + 5 - 6$

$$= 22 - 6 = 16$$

(b)  $16 \div 4 \times 7$

$$= 4 \times 7 = 28$$

(c)  $25 + 8 \times 6$

$$= 25 + 24 = 49$$

(d)  $30 \div 3 \times 5 + 17$

$$= 5 \times 5 + 17$$

$$= 50 + 17 = 67$$

(e)  $20 + 16 \div 4 \times 5 - 4$

$$= 20 + 4 \times 5 - 4$$

$$= 20 + 20 - 4 = 36$$

(f)  $50 \div 10 \times 3 - 7$

$$= 5 \times 3 - 7$$

$$= 15 - 7 = 8$$

(g)  $50 + 200 \div 2 \times 5 - 200$

$$= 50 + 100 \times 5 - 200$$

$$= 50 + 500 - 200$$

$$= 550 - 200 = 350$$

(h)  $50 \div 5 + 40 - 4 \times 8$

$$= 10 + 40 - 4 \times 8$$

$$= 10 + 40 - 32$$

$$= 50 - 32 = 18$$

$$(i) 17 + 48 \div 6 \times 5 - 4$$

$$= 17 + 8 \times 5 - 4$$

$$= 17 + 40 - 4$$

$$= 57 - 4$$

$$= 53$$

$$(j) 65 - 12 \div 12 \times 5 - 6$$

$$= 65 - 5 - 6$$

$$= 65 - 11$$

$$= 54$$

$$(k) 480 \div 3 \times 50 - 40 \times 3$$

$$= 160 + 50 - 40 \times 3$$

$$= 160 + 50 - 120$$

$$= 210 - 120$$

$$= 90$$

$$(l) 35 \div 5 \times 30 - 50$$

$$= 7 \times 30 - 50$$

$$= 210 - 50$$

$$= 160$$

$$(m) 200 - 20 \div 2 \times 20 + 7$$

$$= 200 - 10 \times 20 + 7$$

$$= 200 - 200 + 7 = 7$$

$$(n) 60 + 20 \div 4 + 50 \times 5$$

$$= 60 + 5 + 50 \times 5$$

$$= 60 + 5 + 250$$

$$= 315$$

$$(o) 100 \div 20 + 5 - 10$$

$$= 5 + 5 - 10$$

$$= 10 - 10$$

$$= 0$$

### Exercise - 3.11

#### 1. Simplify:

$$(a) 40 - \{36 \div (8 - 4)\}$$

$$= 40 - \{36 \div 4\}$$

$$= 40 - 9 = 31$$

$$(b) 15 - \{10 \div (2 \times 5 - 5)\}$$

$$= 15 - \{10 \div 5\}$$

$$= 15 - 2 = 13$$

$$(c) 3 [9 + \{8 \times 4 (2 + 5 - 4)\}]$$

$$3 [9 + \{8 \times 4(5)\}]$$

$$3 [9 + \{8 \times 20\}]$$

$$3 [9 + 160]$$

$$3 [250]$$

$$3 \times 250 = 750$$

$$(d) 48 - \{20 \div 5 + 4 (2 + 3)\}$$

$$48 - \{20 \div 5 + 4 \times 5\}$$

$$48 - \{4 + 20\}$$

$$48 - 24$$

$$= 24$$

$$(e) [180 \div \{25 + 4 (4 + 5 - 4)\}]$$

$$[180 \div \{25 + 4 \times 5 - 4\}]$$

$$[180 \div \{25 + 20\}]$$

$$[180 \div 45] = 4$$

$$(f) [\{(30 - 5 + 7) \div 4\} \times 7 + 7]$$

$$[\{(37 - 5) \div 4\} \times 7 + 7]$$

$$[\{32 \div 4\} \times 7 + 7]$$

$$[8 \times 7 + 7]$$

$$[56 + 7] = 63$$

$$(g) [24 \div \{8 - (8 - 6 - 2)\}]$$

$$[24 \div \{8 - 0\}]$$

$$[24 \div 8] = 3$$

$$(h) [\{64 - (12 + 18) \div 2\} + 18]$$

$$[\{64 - 30 \div 2\} + 18]$$

$$[\{64 - 15\} + 18]$$

$$[49 + 18] = 67$$

$$(i) 10 \times 10 + [400 \div \{100 - (50 - 3 \times 3)\}]$$

$$10 \times 10 + [400 \div \{100 - 20\}]$$

$$100 + [400 \div 80]$$

$$100 + 6$$

$$= 105$$

$$(j) 80 + [20 \times \{20 - (10 \div 2)\}]$$

$$80 + [20 \times \{20 - 5\}]$$

$$80 + [20 \times 15]$$

$$80 + 300 = 380$$

## Chapter-4

### Exercise - 4.1

**1. Check whether the following statement are true and false:**

- (a) False (b) True (c) Yes  
(d) False (e) True (f) False

**2. Write the factors of the following numbers:**

- (a) 100 : Factors of 100 = 1, 2, 4, 5, 10, 20, 50, 100  
(b) 84 : Factors of 84 = 1, 2, 3, 4, 6, 7, 12  
(c) 72 : Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12  
(d) 60 : Factors of 60 = 1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60  
(e) 52: Factors of 52 = 1, 2, 4, 13

**3. Write the first 10 multiples of the following numbers:**

- (a) Multiples of 12 = 12, 24, 36, 48, 60, 72, 84, 96, 108, 120  
(b) Multiples of 14 = 14, 28, 42, 56  
(c) Multiples of 16 = 16, 32 .....  
(d) to (f) Do yourself.

**4. Fill in the blanks:**

- (a) Less than (b) Greater than  
(c) 1 (d) Number itself  
(e) Number itself (f) 1

### Exercise - 4.2

**1. Check whether these numbers are divisible by 2 or not:**

- (a) 1015  
It is not divisible by 2, because its last digit is not even  
(b) It is divisible by 2, because its last digit is even  
(c) It is divisible by 2, because its last digit is even

- (d) It is not divisible by 2, because its last digit is not even  
(e) It is not divisible by 2, because its last digit is not even  
(f) It is divisible by 2, because its last digit is even  
(g) It is divisible by 2, because its last digit is even  
(h) It is not divisible by 2, because its last digit is zero  
(i) It is not divisible by 2, because its last digit is not even  
(j) It is not divisible by 2, because its last digit is not even  
(k) It is not divisible by 2, because its last digit is not even  
(l) It is divisible by 2, because its last digit is even

**2. Check whether these number are divisible by 3 or not:**

- (a) 6270  
Sum of digits =  $6 + 2 + 7 + 0 = 15$  (Multiple of 3)  
So, 6270 is divisible by 3  
(b) 2467  
Sum of digits =  $2 + 4 + 6 + 7 = 19$  (Not a multiple of 3)  
So, 2467 is not divisible by 3  
(c) 5436  
Sum of digits =  $5 + 4 + 3 + 6 = 18$  (Multiple of 3)  
So, 5436 is a divisible by 3  
(d) 9006  
Sum of digits =  $9 + 0 + 0 + 6 = 15$  (Multiple of 3)

- So, 9006 is a divisible by 3
- (e) 4329  
Sum of digits =  $4 + 3 + 2 + 9$   
= 18 (Multiple of 3)  
So, 4329 is a divisible by 3
- (f) 4562  
Sum of digits =  $4 + 5 + 6 + 2$   
= 17 (Not a multiple of 3)  
So, 4562 is not a divisible by 3
- (g) 2030  
Sum of digits =  $2 + 0 + 3 + 0$   
= 5 (Not a multiple of 3)  
So, 2030 is not a divisible by 3
- (h) 6623  
Sum of digits =  $6 + 6 + 2 + 3$   
= 17 (Not a multiple of 3)  
So, 6623 is not a divisible by 3
- (i) 7464  
Sum of digits =  $7 + 4 + 6 + 4$   
= 21 (Multiple of 3)  
So, 7464 is a divisible by 3
- (j) 4123  
Sum of digits =  $4 + 1 + 2 + 3$   
= 10 (Not a multiple of 3)  
So, 4123 is not a divisible by 3
- (k) 2211  
Sum of digits =  $2 + 2 + 1 + 1$   
= 6 (Multiple of 3)  
So, 2211 is a divisible by 3
- (l) 6532  
Sum of digits =  $6 + 5 + 3 + 2$   
= 16 (Not a multiple of 3)  
So, 6532 is not a divisible by 3

#### Exercise - 4.3

- 0
- 12, 14, 16, 18, 20, 22, 24, 26, 28, 30
- 2
- Encircle the even number and underline the add number:

- (a) 347 (b) (456) (c) (930)  
(d) (732) (e) (898) (f) (2003)  
(g) 5679 (h) (3022) (i) (3026)  
(j) 199 (k) (7354) (l) (4318)

#### 5. Write the prime numbers which are less than 30:

2, 3, 5, 7, 11, 13, 17, 19, 23, 29

#### 6. Observe the pattern and complete the series:

- (a) 324, 326, 328, 330, 332, 334,  
336, 338, 340  
(b) 253, 256, 259, 262, 265, 268,  
271, 274, 277  
(c) 235, 245, 255, 265, 275, 285,  
295, 305, 315  
(d) 115, 120, 125, 130, 135, 140,  
145, 150, 155

#### 7. Select the co-prime numbers:

- (a) 11 and 13 (c) 17 and 19  
(e) 25 and 27

#### Exercise - 4.4

#### 1. Find the prime factors of following by division method:

- (a) 196

$$\begin{array}{r} 2 \overline{) 196} \\ \underline{2} \phantom{00} 96 \\ \underline{7} \phantom{00} 49 \\ \underline{7} \phantom{00} 7 \\ \underline{1} \phantom{00} 0 \end{array}$$

$$196 = 2 \times 2 \times 7 \times 7$$

- (b) 216

$$\begin{array}{r} 2 \overline{) 216} \\ \underline{2} \phantom{00} 16 \\ \underline{2} \phantom{00} 108 \\ \underline{3} \phantom{00} 54 \\ \underline{3} \phantom{00} 27 \\ \underline{3} \phantom{00} 9 \\ \underline{3} \phantom{00} 3 \\ \underline{1} \phantom{00} 0 \end{array}$$

$$216 = 2 \times 2 \times 2 \times 3 \times 3 \times 3$$

(c) 256

|   |     |
|---|-----|
| 2 | 256 |
| 2 | 128 |
| 2 | 64  |
| 2 | 32  |
| 2 | 16  |
| 2 | 8   |
| 2 | 4   |
| 2 | 2   |
|   | 1   |

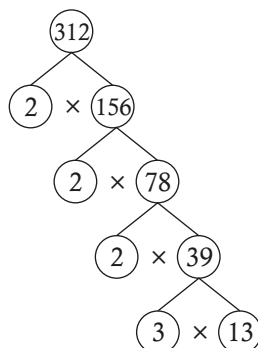
$$256 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$$

$$225 = 3 \times 3 \times 5 \times 5$$

(d) 225

|   |     |
|---|-----|
| 5 | 225 |
| 3 | 75  |
| 5 | 25  |
| 5 | 5   |
|   | 1   |

(b) 312



$$312 = 2 \times 2 \times 2 \times 3 \times 13$$

(e) 400

|   |     |
|---|-----|
| 2 | 400 |
| 2 | 200 |
| 2 | 100 |
| 2 | 50  |
| 5 | 25  |
| 5 | 5   |
|   | 1   |

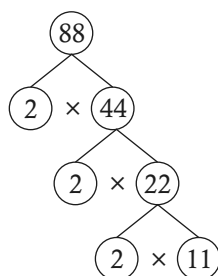
$$400 = 2 \times 2 \times 2 \times 2 \times 5 \times 5$$

$$108 = 2 \times 2 \times 3 \times 3 \times 3$$

(f) 108

|   |     |
|---|-----|
| 2 | 108 |
| 2 | 54  |
| 3 | 27  |
| 3 | 9   |
| 3 | 3   |
|   | 1   |

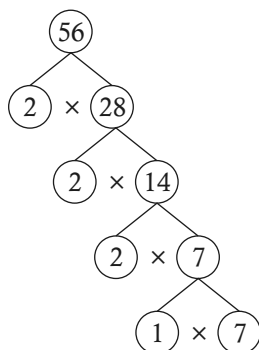
(c) 88



$$88 = 2 \times 2 \times 2 \times 11$$

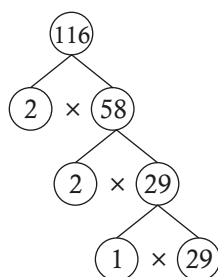
**2. Find the prime factors of the following by true factorization method:**

(a) 56



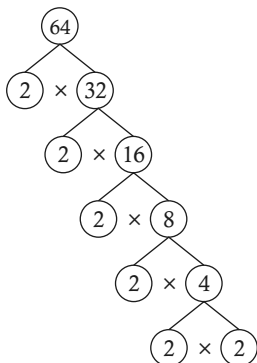
$$56 = 2 \times 2 \times 2 \times 7$$

(d) 116



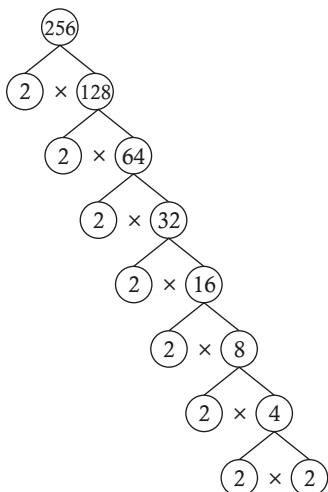
$$116 = 2 \times 2 \times 29$$

(e) 64



$$64 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$$

(f) 256



$$256 = 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2 \times 2$$

#### Exercise - 4.5

1. Find the common factors of the following:

(a) 16, 32, 48

Factors of 16 = 1, 2, 4, 8, 16

Factors of 32 = 1, 2, 4, 8, 32

Factors of 48 = 1, 2, 3, 4, 6, 8, 12, 16

Common factors = 1, 2, 4, 8

(b) 12, 36, 60

Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 36 = 1, 2, 4, 6, 9, 12, 18, 36

Factors of 60 = 1, 2, 3, 4, 5, 6, 10, 12, 20, 30, 60

Common factors = 1, 2, 3, 4, 6, 12

(c) 13, 39

Factors of 13 = 1, 13

Factors of 39 = 1, 3, 13, 39

Common factors = 1, 13

(d) 18, 54

Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 54 = 1, 2, 3, 6, 9, 18, 27, 54

Common factors = 1, 2, 3, 6, 9, 18

(e) 10, 20, 30

Factors of 10 = 1, 2, 5, 10

Factors of 20 = 1, 2, 4, 5, 10, 20

Factors of 30 = 1, 2, 3, 5, 6, 10, 15, 30

Common factors = 1, 2, 5, 10

2. Find the H.C.F by common factors method of the following:

(a) 12, 16

Factors of 12 = 1, 2, 3, 4, 6, 12

Factors of 16 = 1, 2, 4, 8, 16

Common factors = 1, 2, 4

H.C.F = 4

(b) 18, 36, 72

Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 36 = 1, 2, 3, 4, 6, 9, 12, 18, 36

Factors of 72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 36, 72

Common factors = 1, 2, 3, 6, 9, 18

H.C.F = 18

(c) 25, 50

Factors of 25 = 1, 5, 25

Factors of 50 = 1, 2, 5, 10, 25, 50

Common factors = 1, 5, 25

H.C.F = 25

(d) 18, 90, 108

Factors of 18 = 1, 2, 3, 6, 9, 18

Factors of 90 = 1, 2, 3, 5, 9, 10, 18, 30

Factors of 108 = 1, 2, 3, 6, 9, 12

Common factors = 1, 2, 3, 9

H.C.F = 9

(e) 2, 3, 5

Factors of 2 = 1, 2

Factors of 3 = 1, 3

Factors of 5 = 1, 5

Common factors = 1

H.C.F = 1

**3. Find the H.C.F by prime factors method of the following:**

(a) 16, 64, 48

Solution

|                                                                                                       |                                                                                                                                         |                                                                                                                       |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| $\begin{array}{r l} 2 & 16 \\ \hline 2 & 8 \\ \hline 2 & 4 \\ \hline 2 & 2 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 64 \\ \hline 2 & 32 \\ \hline 2 & 16 \\ \hline 2 & 8 \\ \hline 2 & 4 \\ \hline 2 & 2 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 48 \\ \hline 2 & 24 \\ \hline 2 & 12 \\ \hline 3 & 6 \\ \hline & 3 \\ \hline & 1 \end{array}$ |
|-------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|

$16 = 2 \times 2 \times 2 \times 2$

$90 = 2 \times 2 \times 2 \times 2 \times 2 \times 2$

$48 = 2 \times 2 \times 2 \times 2$

H.C.F =  $2 \times 2 \times 2 \times 2$   
= 16

(b) 45, 15, 30

|                                                                                        |                                                                       |                                                                                        |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| $\begin{array}{r l} 3 & 45 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 30 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$ |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------|

$45 = 3 \times 3 \times 5$

$15 = 3 \times 5$

$30 = 2 \times 3 \times 5$

H.C.F =  $3 \times 5$

= 15

(c) 24, 48, 45

|                                                                                                        |                                                                                                                         |                                                                                        |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| $\begin{array}{r l} 2 & 24 \\ \hline 2 & 12 \\ \hline 2 & 6 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 48 \\ \hline 2 & 24 \\ \hline 2 & 12 \\ \hline 2 & 6 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 3 & 45 \\ \hline 3 & 15 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$ |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|

$24 = 2 \times 2 \times 2 \times 3$

$48 = 2 \times 2 \times 2 \times 2 \times 3$

$45 = 3 \times 3 \times 5$

H.C.F = 3

(d) 24, 72, 18

|                                                                                                        |                                                                                                                         |                                                                                       |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| $\begin{array}{r l} 2 & 24 \\ \hline 2 & 12 \\ \hline 2 & 6 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 72 \\ \hline 2 & 36 \\ \hline 2 & 18 \\ \hline 2 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$ |
|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|

$24 = 2 \times 2 \times 2 \times 3$

$72 = 2 \times 2 \times 2 \times 2 \times 3 \times 3$

$18 = 2 \times 3 \times 3$

H.C.F. =  $2 \times 3$   
= 6

(e) 40, 32, 56

|                                                                                                         |                                                                                                                        |                                                                                                         |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| $\begin{array}{r l} 2 & 40 \\ \hline 2 & 20 \\ \hline 2 & 10 \\ \hline 5 & 5 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 32 \\ \hline 2 & 16 \\ \hline 2 & 8 \\ \hline 2 & 4 \\ \hline 2 & 2 \\ \hline & 1 \end{array}$ | $\begin{array}{r l} 2 & 56 \\ \hline 2 & 28 \\ \hline 2 & 14 \\ \hline 7 & 7 \\ \hline & 1 \end{array}$ |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|

$40 = 2 \times 2 \times 2 \times 5$

$32 = 2 \times 2 \times 2 \times 2 \times 2$

$56 = 2 \times 2 \times 2 \times 7$

H.C.F =  $2 \times 2 \times 2 = 8$

**4. Find the H.C.F of common division method of the following:**

(a) 24, 18

$$\begin{array}{r|l} 2 & 24, 18 \\ \hline 3 & 12, 9 \\ \hline & 4, 3 \end{array}$$

H.C.F =  $3 \times 2 = 6$

(b) 28, 35, 14

$$\begin{array}{r|l} 7 & 28, 35, 14 \\ \hline & 4, 5, 2 \end{array}$$

H.C.F = 7

(c) 48, 72, 36

$$\begin{array}{r|l} 2 & 48, 72, 36 \\ \hline 2 & 24, 36, 18 \\ \hline 3 & 12, 18, 9 \\ \hline & 4, 6, 3 \end{array}$$

H.C.F =  $2 \times 2 \times 3 = 12$

(d) 80, 48, 96

$$\begin{array}{r|l} 2 & 80, 48, 96 \\ \hline 2 & 40, 24, 48 \\ \hline 2 & 20, 12, 24 \\ \hline 2 & 10, 6, 12 \\ \hline & 5, 3, 6 \end{array}$$

H.C.F =  $2 \times 2 \times 2 \times 2 = 16$

(e) 180, 192, 144

$$\begin{array}{r|l} 2 & 180, 192, 144 \\ \hline 2 & 90, 96, 72 \\ \hline 3 & 45, 48, 36 \\ \hline & 15, 16, 12 \end{array}$$

H.C.F =  $2 \times 2 \times 3 = 12$

**5. Find the H.C.F by division method of the following :**

(a) 48, 32

Here  $48 > 32$

So,

$$\begin{array}{r} 32 \overline{) 48} (1 \\ \underline{32} \\ 16 \overline{) 32} (2 \\ \underline{32} \\ \hline \end{array}$$

H.C.F = 16

(b) 60, 150, 96

$$\begin{array}{r} 60 \overline{) 150} (2 \\ \underline{120} \\ 30 \overline{) 60} (2 \\ \underline{60} \\ \hline \end{array} \quad \begin{array}{r} 30 \overline{) 96} (3 \\ \underline{90} \\ 6 \overline{) 30} (5 \\ \underline{30} \\ \hline \end{array}$$

H.C.F = 6

(c) 312, 144

Here  $312 > 144$

So,

$$\begin{array}{r} 144 \overline{) 312} (2 \\ \underline{288} \\ 24 \overline{) 144} (6 \\ \underline{144} \\ \hline \end{array}$$

H.C.F = 24

(d) 20, 36, 16

$$\begin{array}{r} 20 \overline{) 36} (1 \\ \underline{20} \\ 6 \overline{) 20} (3 \\ \underline{18} \\ 2 \overline{) 6} (3 \\ \underline{6} \\ \hline \end{array} \quad \begin{array}{r} 2 \overline{) 16} (8 \\ \underline{16} \\ \hline \end{array}$$

H.C.F = 2

(e) 288, 540

$$\begin{array}{r} 288 \overline{) 540} (1 \\ \underline{288} \\ 252 \overline{) 288} (1 \\ \underline{252} \\ 36 \overline{) 252} (7 \\ \underline{252} \\ \hline \end{array}$$

H.C.F = 36

6.

$$\begin{array}{r} 18 \overline{)24} 1 \\ \underline{18} \\ 6 \overline{)18} 3 \\ \underline{18} \\ \times \end{array}$$

6 is a largest number that divides 18, 24, 48 completely

7.

$$\begin{array}{r} 150 \overline{)350} 2 \\ \underline{300} \\ 50 \overline{)150} 3 \\ \underline{150} \\ \times \end{array}$$

50 is a greatest number which divides 150, 350

#### Exercise - 4.6

1. Write 5 common multiples of each of the following:

(a) 12, 6

Multiples of 12 = 12, 24, 36, 48, 60, 72, 84, 96...

Multiples of 6 = 6, 12, 18, 24, 30, 36, 42, 48, 54, 60

Common multiples = 12, 24, 36, 48, 60

(b) 8, 4

Multiples of 8 = 8, 16, 24, 32, 40, 48, 56, 64, 72, 80

Multiples of 4 = 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48

Common multiples = 8, 16, 24, 32, 40, 48

(c) 15, 10, 5

Multiples of 15 = 15, 30, 45, 60, 75, 90, 105, 120, 135, 150

Multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100,

110, 120, 130

Multiples of 5 = 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70

Common multiples = 30, 60, 90, 120, 150

(d) 30, 10, 20

Multiples of 30 = 30, 60, 90, 120, 150, 180, 210, 240, 270, 300

Multiples of 10 = 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110, 120, 130, 140, 150, 160, 170, 180, 190, 200

Multiples of 20 = 20, 40, 60, 80, 100, 120, 140, 160, 180, 200

Common multiples = 60, 120, 180, 240, 300

(e) 18, 9, 27

Multiples of 18 = 18, 36, 54, 72, 90, 108, 126, 144, 162, 180

Multiples of 9 = 9, 18, 27, 36, 45, 54, 63, 72, 81, 90

Multiples of 27 = 27, 54, 81, 108, 135, 162, 189, 216, 243, 270

2. Find the L.C.M by common multiple method of the following:

(a) 18, 3

Multiples of 18 = 18, 36, 54...

Multiples of 3 = 3, 6, 9, 12, 15, 18...

L.C.M = 18

(b) 33, 22, 11

Multiples of 33 = 33, 66, 99, 132...

Multiples of 22 = 22, 44, 66, 88...

Multiples of 11 = 11, 22, 33, 44, 55, 66, 77, 88...

- L.C.M = 66
- (c) 21, 7, 3  
 Multiples of 21 = 21, 42, 63, 84, 105, 126...  
 Multiples of 7 = 7, 14, 21, 28, 35, 42, 49...  
 Multiples of 3 = 3, 6, 9, 12, 15, 18, 21...  
 L.C.M = 21
- (d) 16, 8, 32  
 Multiples of 16 = 16, 32, 48, 64...  
 Multiples of 8 = 8, 16, 24, 32, 40, 48...  
 Multiples of 32 = 32, 64, 96...  
 L.C.M = 32
- (e) 2, 6, 12, 4  
 Multiples of 2 = 2, 4, 6, 8, 10, 12, 14, 16...  
 Multiples of 6 = 6, 12, 18, 24, 30, 36...  
 Multiples of 12 = 12, 24, 36, 48...  
 Multiples of 4 = 4, 2, 12, 16, 20, 24...  
 L.C.M = 12

**3. Find the L.C.M by prime factorization method of the following:**

- (a) 36, 16  
 Prime factors of 36 =  $2 \times 2$   
 Prime factors of 16 =  $2 \times 2 \times 2 \times 2$   
 Common factors =  $2 \times 2$   
 Remaining factors =  $2 \times 2 \times 2 \times 3$   
 L.C.M =  $2 \times 2 \times 2 \times 2 \times 3 \times 3$   
 = 96

- (b) 54, 18

Prime factors of 54 =  $2 \times 3 \times 3 \times 3$

Prime factors of 18 =  $2 \times 3 \times 3$

Common factors =  $2 \times 3 \times 3$

Remaining factors = 3

L.C.M =  $2 \times 3 \times 3 \times 3 = 54$

- (c) 48, 32, 16

Prime factors of 48 =  $2 \times 2 \times 2 \times 3$

Prime factors of 32 =  $2 \times 2 \times 2 \times 2$

Prime factors of 16 =  $2 \times 2 \times 2 \times 2$

Common factors =  $2 \times 2 \times 2 \times 2$

Remaining factors = 3

L.C.M =  $2 \times 2 \times 2 \times 2 \times 3 = 48$

- (d) 30, 10, 20

Prime factors of 30 =  $2 \times 3 \times 5$

Prime factors of 10 =  $2 \times 5$

Prime factors of 20 =  $2 \times 2 \times 5$

Common factors =  $2 \times 5$

Remaining factors =  $3 \times 2$

L.C.M =  $2 \times 5 \times 3 \times 2 = 60$

- (e) 45, 30, 15

Prime factors of 45 =  $3 \times 3 \times 5$

Prime factors of 30 =  $2 \times 3 \times 5$

Prime factors of 15 =  $3 \times 5$

Common factors =  $3 \times 5$

Remaining factors =  $3 \times 2$

L.C.M =  $3 \times 3 \times 5 \times 2 = 90$

**4. Find the L.C.M by common division method of the following:**

- (a) 16, 12

$$\begin{array}{r|rr} 2 & 16 & 12 \\ 2 & 8 & 6 \\ \hline & 4 & 3 \end{array}$$

H.C.F =  $2 \times 2 \times 4 \times 3$

=  $4 \times 4 \times 3 = 48$

(b) 50, 25

$$\begin{array}{r|l} 5 & 50, 25 \\ \hline 5 & 10, 5 \\ \hline & 2, 1 \end{array}$$

$$\text{L.C.M.} = 5 \times 5 \times 2 = 50$$

(c) 36, 18, 72

$$\begin{array}{r|l} 2 & 36, 18, 72 \\ \hline 3 & 18, 9, 36 \\ \hline 3 & 6, 3, 12 \\ \hline 2 & 2, 1, 4 \\ \hline 2 & 1, 1, 2 \\ \hline & 1, 1, 1 \end{array}$$

$$\text{L.C.M.} = 2 \times 3 \times 3 \times 2 \times 2 = 72$$

(d) 90, 108, 18

$$\begin{array}{r|l} 2 & 90, 108, 18 \\ \hline 3 & 45, 54, 9 \\ \hline 3 & 15, 18, 3 \\ \hline & 5, 6, 1 \end{array}$$

$$\text{L.C.M.} = 2 \times 3 \times 3 \times 5 \times 6 = 540$$

(e) 5, 3, 2

$$\begin{array}{r|l} 5 & 5, 3, 2 \\ \hline 3 & 1, 3, 2 \\ \hline 2 & 1, 1, 2 \\ \hline & 1, 1, 1 \end{array}$$

$$\text{L.C.M.} = 5 \times 3 \times 2 = 30$$

#### Exercise 4.7

1. Verify the relationship, product H.C.F. and L.C.M. = product of two number:

(a) 36, 24

Sol Two number 36, 24

$$\begin{array}{r} \text{H.C.F of } 36, 24 \\ 24 \overline{) 36} (1 \\ \underline{24} \\ 12 \overline{) 24} (2 \\ \underline{24} \\ \times \end{array}$$

$$\text{H.C.F} = 12$$

$$\text{L.C.M of } 36 \text{ and } 24$$

$$\begin{array}{r|l} 2 & 36, 24 \\ \hline 2 & 18, 12 \\ \hline 2 & 9, 6 \\ \hline 3 & 9, 3 \\ \hline 3 & 3, 1 \\ \hline & 1, 1 \end{array}$$

$$2 \times 2 \times 2 \times 3 \times 3 = 72$$

Product of H.C.F and L.C.M

$$= 12 \times 72 = 864$$

Product of two number =

$$36 \times 24 = 864 \text{ Both are equal}$$

(b) 30, 25

$$\text{H.C.F of } 30 \text{ and } 25$$

$$\begin{array}{r} 25 \overline{) 30} (1 \\ \underline{25} \\ 5 \overline{) 25} (5 \\ \underline{25} \\ \times \end{array}$$

$$\text{H.C.F} = 5$$

$$\text{L.C.M of } 30 \text{ and } 25$$

$$\begin{array}{r|l} 5 & 30, 25 \\ \hline 5 & 6, 5 \\ \hline 6 & 6, 1 \\ \hline & 1, 1 \end{array}$$

$$5 \times 5 \times 6 = 150$$

Product of H.C.F and L.C.M

$$= 5 \times 150 = 750$$

Product of two number

$$= 25 \times 30 = 750 \text{ Both are equal}$$

(c) 25, 20

$$\text{H.C.F of } 25 \text{ and } 20$$

$$\begin{array}{r} 20 \overline{) 25} (1 \\ \underline{20} \\ 5 \overline{) 20} (4 \\ \underline{20} \\ \times \end{array}$$

$$\text{H.C.F} = 5$$

L.C.M of 25 and 20

$$\begin{array}{r|l} 5 & 25, 20 \\ \hline 5 & 5, 4 \\ \hline 4 & 1, 4 \\ \hline & 1, 1 \end{array}$$

$$5 \times 5 \times 4 = 100$$

Product of H.C.F and L.C.M

$$= 5 \times 100 = 500$$

Product of two number

$$= 25 \times 20 = 500$$

Both are equal

(d) 84, 14

H.C.F of 84, 14

$$\begin{array}{r} 14 \overline{)84} (6 \\ \underline{84} \\ 0 \end{array}$$

$$\text{H.C.F} = 14$$

L.C.M of 84 and 14

$$\begin{array}{r|l} 2 & 84, 14 \\ \hline 2 & 42, 7 \\ \hline 3 & 21, 7 \\ \hline 7 & 7, 7 \\ \hline & 1, 1 \end{array}$$

$$2 \times 2 \times 2 \times 7 = 84$$

Product of H.C.F and L.C.M

$$= 1176$$

Product of two number

$$= 14 \times 84 = 1176$$

Both are equal

(e) 80, 40

H.C.F of 80 and 40

$$\text{H.C.F} = 40$$

$$\begin{array}{r} 40 \overline{)80} (2 \\ \underline{80} \\ 0 \end{array}$$

L.C.M of 80 and 40

$$\begin{array}{r|l} 2 & 40, 80 \\ \hline 2 & 20, 40 \\ \hline 2 & 10, 20 \\ \hline 2 & 5, 10 \\ \hline 5 & 5, 5 \\ \hline & 1, 1 \end{array}$$

$$2 \times 2 \times 2 \times 2 \times 5 = 80$$

Product of H.C.F and L.C.M

$$= 40 \times 80 = 3200$$

Product of two number

$$= 80 \times 40 = 3200$$

Both are equal

2. Product of the number = 750

L.C.M = 150

H.C.F = ?

$$\frac{\text{Product of two number}}{\text{L.C.M}} = \text{H.C.F}$$

$$= \frac{750}{150}$$

$$\text{H.C.F} = 5$$

3. Two number are = 10, 30

H.C.F = 10

L.C.M = ?

$$\text{L.C.M} = \frac{\text{Product of two number}}{\text{H.C.F}}$$

$$= \frac{10 \times 30}{10} = 30$$

$$\text{L.C.M} = 10$$

4.

$$\begin{array}{r} 141 \overline{)171} (1 \\ \underline{141} \\ 30 \overline{)141} (4 \\ \underline{120} \\ 21 \overline{)30} (1 \\ \underline{21} \\ 9 \overline{)21} (2 \\ \underline{18} \\ 3 \overline{)9} (3 \\ \underline{9} \\ 0 \end{array}$$

3 is a number which divides 171 and 141 exactly

5.

$$\begin{array}{r|l} 3 & 6, 9, 18 \\ 3 & 2, 3, 6 \\ 2 & 2, 1, 2 \\ \hline & 1, 1, 1 \end{array}$$

$$3 \times 3 \times 2 = 18$$

18, is a smallest number which divisible 6, 9, 18 exactly

6. Quantity of milk in two container = 24 L, 36L

$$\begin{array}{r} 24 \overline{)36} (1 \\ \underline{24} \\ 12 \overline{)24} (2 \\ \underline{24} \\ \hline \end{array}$$

So, the 12 L milk can exactly measure from both container

7.

$$\begin{array}{r|l} 2 & 20, 8 \\ 2 & 10, 4 \\ 2 & 5, 2 \\ 5 & 5, 1 \\ \hline & 1, 1 \end{array}$$

$$2 \times 2 \times 2 \times 5 = 40$$

$\therefore$  40 m length of a hall in which exactly number of table

8.

$$\begin{array}{r} 585 \overline{)975} (1 \\ \underline{585} \\ 390 \overline{)585} (1 \\ \underline{390} \\ 95 \overline{)390} (4 \\ \underline{380} \\ 10 \overline{)95} (9 \\ \underline{90} \\ 5 \overline{)10} (2 \\ \underline{10} \\ \hline \end{array}$$

So, the greatest number is 5.

9.

$$\begin{array}{r} 902 \overline{)1394} (1 \\ \underline{902} \\ 492 \overline{)902} (2 \\ \underline{492} \\ 410 \overline{)492} (1 \\ \underline{410} \\ 82 \overline{)410} (5 \\ \underline{410} \\ \hline \end{array}$$

$$\begin{array}{r} 82 \overline{)1476} (18 \\ \underline{82} \\ 656 \\ \underline{656} \\ \hline \end{array}$$

10.

$$\begin{array}{r|l} 2 & 96, 108, 180 \\ 2 & 48, 54, 90 \\ 2 & 24, 27, 45 \\ 2 & 12, 27, 45 \\ 2 & 6, 27, 45 \\ 3 & 3, 27, 45 \\ 3 & 1, 9, 15 \\ 3 & 1, 3, 5 \\ 5 & 1, 1, 5 \\ \hline & 1, 1, 1 \end{array}$$

## s Chapter-5

### Exercise - 5.1

1. Put a tick on each pair of like fractions:

1. (a) No (b) Yes (c) No (d) Yes
2. (a) Yes (b) Yes (c) Yes (d) No
3. a ✓ b ✓ c ✓ d ✓ e ✓ f ✗
4. a ✓ b ✓ c ✓ d ✓ e ✗ f ✗
5. a ✓ b ✓ c ✓ d ✓ e ✓ f ✗

6. Convert into improper fractions:

- (a)  $\frac{13}{5}$  (b)  $\frac{11}{2}$  (c)  $\frac{45}{10}$  (d)  $\frac{31}{4}$
- (e)  $\frac{19}{7}$  (f)  $\frac{37}{8}$

7. Convert in to mixed fractions:

- (a)  $6\frac{7}{9}$  (b)  $4\frac{1}{5}$  (c)  $2\frac{1}{3}$  (d)  $1\frac{3}{8}$
- (e)  $1\frac{2}{15}$  (f)  $60\frac{11}{25}$

8. Convert into improper fractions:

- (a)  $\frac{6}{10}, \frac{9}{15}, \frac{12}{20}$  (b)  $\frac{8}{18}, \frac{12}{27}, \frac{16}{36}$
- (c)  $\frac{14}{25}, \frac{21}{33}, \frac{28}{44}$  (d)  $\frac{12}{26}, \frac{18}{39}, \frac{24}{52}$
- (e)  $\frac{8}{30}, \frac{12}{45}, \frac{16}{60}$  (f)  $\frac{34}{30}, \frac{51}{45}, \frac{68}{60}$
- (g)  $\frac{32}{26}, \frac{48}{39}, \frac{64}{52}$  (h)  $\frac{30}{32}, \frac{45}{48}, \frac{60}{64}$

9. (a) Yes (b) No (c) No (d) Yes

(e) No (f) Yes

10. Fill in the blanks:

- (a)  $\frac{6}{5} = \frac{[60]}{50}$  (b)  $\frac{81}{108} = \frac{9}{[12]}$
- (c)  $\frac{7}{11} = \frac{[21]}{33}$  (d)  $\frac{5}{6} = \frac{35}{[42]}$
- (e)  $\frac{35}{40} = \frac{[7]}{8}$

11.  $\frac{12}{11} \times 121 = 132$

$$12. \frac{30}{35} \times \frac{180}{1} = \frac{30}{35} \times \frac{1}{180} = \frac{1}{210} = 210$$

### Exercise - 5.2

1. (a) No (b) Yes (c) No (d) Yes  
(e) Yes (f) No

2. (a)  $\frac{108}{98} = \frac{9}{8}$  (b)  $\frac{93}{69} = \frac{31}{23}$
- (c)  $\frac{102}{150} = \frac{17}{25}$  (d)  $\frac{115}{205} = \frac{23}{41}$
- (e)  $\frac{65}{15} = \frac{13}{3}$  (f)  $\frac{155}{245} = \frac{31}{49}$

3. (a) < (b) < (c) < (d) < (e) < (g) >  
(h) > (i) > (j) > (k) > (l) > (m) >  
(n) < (o) < (p) < (q) <

4. Write the following in ascending order:

- (a)  $\frac{3}{12} < \frac{5}{12} < \frac{6}{12} < \frac{17}{12} < \frac{19}{12}$
- (b)  $\frac{3}{4} < \frac{3}{10} < \frac{3}{12} < \frac{3}{16} < \frac{3}{18}$
- (c)  $\frac{5}{12} < \frac{18}{36} < \frac{17}{24} < \frac{7}{8} < \frac{15}{16}$
- (d)  $\frac{2}{18} < \frac{3}{12} < \frac{4}{15} < \frac{1}{3} < \frac{5}{9}$

5. (a)  $\frac{16}{8} > \frac{14}{8} > \frac{12}{8} > \frac{7}{8}$
- (b)  $\frac{5}{3} > \frac{5}{6} > \frac{5}{10} > \frac{5}{12} > \frac{5}{15}$
- (c)  $\frac{5}{6} > \frac{2}{3} > \frac{7}{12} > \frac{3}{8} > \frac{1}{4}$
- (d)  $\frac{7}{24} > \frac{3}{12} > \frac{4}{24} > \frac{6}{48} > \frac{2}{24}$

### Exercise - 5.3

1. Find the sum of the following:

- (a)  $\frac{5}{8} + \frac{3}{8} = \frac{5+3}{8} = 1$
- (b)  $\frac{4}{9} + \frac{6}{9} = \frac{4+6}{9} = \frac{10}{9}$

$$(c) \frac{7}{12} + \frac{5}{12} \frac{7+5}{12} = \frac{12}{12} = 1$$

$$(d) \frac{8}{14} + \frac{6}{14} \frac{8+6}{14} = 1$$

$$(e) \frac{12}{16} + \frac{3}{16} + \frac{5}{16} \\ = \frac{12+3+5}{16} = \frac{20}{16} = \frac{5}{4}$$

$$(f) \frac{18}{22} + \frac{5}{22} + \frac{17}{22} \\ = \frac{18+5+17}{22} = \frac{40}{22} = \frac{20}{11}$$

$$(g) \frac{12}{20} + \frac{3}{20} + \frac{9}{20} \\ = \frac{12+3+9}{20} = \frac{24}{20} = \frac{6}{5}$$

$$(h) \frac{6}{15} + \frac{4}{15} + \frac{10}{15} \\ = \frac{6+4+10}{15} = \frac{20}{15} = \frac{4}{3}$$

$$(i) 5\frac{2}{6} + 3\frac{3}{6} + 4\frac{2}{6} = \frac{32}{6} + \frac{21}{6} + \frac{26}{6} \\ = \frac{32+21+26}{6} = \frac{79}{6} = 13\frac{1}{6}$$

$$(j) 2\frac{3}{12} + 3\frac{4}{12} + 5\frac{6}{12} = \frac{27}{12} + \frac{40}{12} + \frac{66}{12} \\ = \frac{27+40+66}{12} = \frac{133}{12} = 11\frac{1}{12}$$

$$(k) 3\frac{3}{4} + 4\frac{2}{4} + 6\frac{2}{4} = \frac{15}{4} + \frac{18}{4} + \frac{26}{4} \\ = \frac{15+18+26}{4} = \frac{59}{4} = 14\frac{3}{4}$$

$$(l) 2\frac{6}{14} + 5\frac{3}{14} + 3\frac{3}{14} \\ = \frac{34}{14} + \frac{72}{14} + \frac{45}{14} \\ = \frac{34+72+45}{14} = \frac{151}{14} \\ = \frac{151}{14} = 10\frac{11}{14}$$

$$(a) \frac{5}{8} + \frac{6}{24} \\ = \frac{15+6}{24} = \frac{21}{24} = \frac{7}{8} = \frac{7}{8}$$

$$\begin{array}{r|l} 2 & 8, 24 \\ \hline 2 & 4, 12 \\ \hline 2 & 2, 6 \\ \hline 3 & 1, 3 \\ \hline & 1, 1 \end{array}$$

$$= 2 \times 2 \times 2 \times 2 \times 3 = 24$$

$$(b) \frac{20}{8} + \frac{4}{5} \\ = \frac{100+32}{40} = \frac{132}{40} = 3\frac{6}{20} = 3\frac{6}{20}$$

$$\begin{array}{r|l} 2 & 8, 5 \\ \hline 2 & 4, 5 \\ \hline 2 & 2, 5 \\ \hline 5 & 1, 5 \\ \hline & 1, 1 \end{array}$$

$$= 2 \times 2 \times 2 \times 5 = 40$$

$$(c) \frac{2}{6} + \frac{6}{18} = \frac{6+6}{18} = \frac{12}{18} = \frac{2}{3} = \frac{2}{3}$$

$$\begin{array}{r|l} 2 & 6, 18 \\ \hline 3 & 3, 9 \\ \hline 3 & 1, 3 \\ \hline & 1, 1 \end{array}$$

$$= 2 \times 3 \times 3 = 18$$

$$(d) \frac{9}{15} + \frac{10}{45} = \frac{27+10}{45} = \frac{37}{45}$$

$$\begin{array}{r|l} 3 & 15, 45 \\ \hline 3 & 5, 15 \\ \hline 5 & 5, 5 \\ \hline & 1, 1 \end{array}$$

$$= 3 \times 3 \times 5 = 45$$

$$(e) 5\frac{3}{6} + 6\frac{5}{18} + 2\frac{2}{15} \\ = \frac{33}{6} + \frac{113}{18} + \frac{32}{15} \\ = \frac{495+565+192}{90} = \frac{1252}{90}$$

2. Find the sum of the following:

$$= 13 \frac{82}{90} = 13 \frac{41}{45}$$

$$\begin{array}{r} 2 \overline{) 6, 18, 15} \\ 3 \overline{) 3, 9, 5} \\ 3 \overline{) 2, 3, 5} \\ 5 \overline{) 1, 1, 3} \\ 1, 1, 1 \end{array}$$

$$= 2 \times 3 \times 3 \times 5 = 90$$

$$(f) 2 \frac{4}{5} + 3 \frac{2}{10} + 5 \frac{2}{15} = \frac{14}{5} + \frac{32}{10} + \frac{77}{15} \\ = \frac{84 + 96 + 154}{30} = \frac{334}{30}$$

$$= 11 \frac{4}{30} = 11 \frac{2}{15}$$

$$\begin{array}{r} 2 \overline{) 5, 10, 15} \\ 3 \overline{) 5, 5, 15} \\ 5 \overline{) 5, 5, 5} \\ 1, 1, 1 \end{array}$$

$$= 3 \times 2 \times 5 = 30$$

$$(g) 5 \frac{2}{3} + 2 \frac{2}{6} + 3 \frac{2}{5} = \frac{17}{3} + \frac{14}{6} + \frac{17}{5} \\ = \frac{170 + 70 + 102}{30} = \frac{342}{30}$$

$$= 11 \frac{122}{30} = 11 \frac{2}{5}$$

$$\begin{array}{r} 2 \overline{) 3, 6, 5} \\ 3 \overline{) 3, 3, 5} \\ 5 \overline{) 1, 1, 5} \\ 1, 1, 1 \end{array}$$

$$= \times 2 \times 2 \times 5 = 30$$

$$(h) 19 \frac{2}{3} + \frac{16}{1} + 21 \frac{2}{2} = \frac{59}{3} + \frac{16}{1} + \frac{44}{2} \\ = \frac{118 + 96 + 132}{6} = \frac{346}{6}$$

$$= 57 \frac{4}{6} = 57 \frac{2}{3}$$

$$\begin{array}{r} 2 \overline{) 3, 1, 2} \\ 3 \overline{) 3, 1, 1} \\ 1, 1, 1 \end{array}$$

$$= 2 \times 3 = 6$$

$$(i) 9 \frac{2}{2} + 2 \frac{2}{3} + \frac{2}{4} = \frac{20}{2} + \frac{8}{3} + \frac{2}{4} \\ = \frac{120 + 32 + 6}{12} = \frac{158}{12}$$

$$= 13 \frac{2}{12} = 13 \frac{1}{6}$$

$$\begin{array}{r} 2 \overline{) 2, 3, 4} \\ 2 \overline{) 1, 3, 2} \\ 3 \overline{) 1, 3, 1} \\ 1, 1, 1 \end{array}$$

$$= 2 \times 2 \times 3 = 12$$

$$(j) 8 \frac{2}{2} + 4 \frac{3}{3} + \frac{7}{5} = \frac{18}{2} + \frac{15}{3} + \frac{7}{5} \\ = \frac{270 + 150 + 7}{30} = \frac{462}{30}$$

$$= 15 \frac{12}{30} = 15 \frac{2}{5}$$

$$\begin{array}{r} 2 \overline{) 2, 3, 5} \\ 3 \overline{) 1, 3, 5} \\ 5 \overline{) 1, 1, 5} \\ 1, 1, 1 \end{array}$$

$$= 2 \times 3 \times 5 = 30$$

$$(k) 8 \frac{6}{11} + \frac{3}{5} + 4 \frac{2}{5} = \frac{94}{11} + \frac{3}{5} + \frac{22}{5} \\ = \frac{470 + 33 + 242}{55} = \frac{745}{55}$$

$$= 13 \frac{30}{55} = 13 \frac{6}{11}$$

$$\begin{array}{r} 5 \overline{) 11, 5, 5} \\ 11 \overline{) 11, 1, 1} \\ 1, 1, 1 \end{array}$$

$$= 11 \times 5 = 55$$

$$(l) 3 \frac{5}{9} + 4 \frac{6}{10} + 3 \frac{2}{27} \\ = \frac{32}{9} + \frac{46}{10} + \frac{83}{27} \\ = \frac{960 + 1242 + 830}{270} = \frac{3032}{270}$$

$$= 11 \frac{62}{27} = 11 \frac{31}{135}$$

$$\begin{array}{r|l} 2 & 9, 10, 27 \\ 3 & 9, 5, 40 \\ 3 & 3, 5, 20 \\ 3 & 1, 5, 10 \\ 5 & 1, 5, 5 \\ \hline & 1, 1, 1 \end{array}$$

$$= 2 \times 3 \times 3 \times 3 \times 5 = 270$$

### 3. Subtract the following:

$$(a) \frac{4}{12} - \frac{3}{12} = \frac{4-3}{12} = \frac{1}{12}$$

$$(b) \frac{9}{16} - \frac{4}{16} = \frac{9-4}{16} = \frac{5}{16}$$

$$(c) \frac{19}{38} - \frac{3}{38} = \frac{19-3}{38} = \frac{16}{38} = \frac{8}{19}$$

$$(d) \frac{19}{20} - \frac{3}{20} = \frac{19-3}{20} = \frac{16}{20} = \frac{4}{5}$$

$$(e) 7\frac{2}{5} - 4\frac{3}{5} = \frac{37}{5} - \frac{23}{5} = \frac{37-23}{5} = \frac{14}{5} = 2\frac{4}{5}$$

$$(f) 3\frac{6}{9} - 2\frac{2}{9} = \frac{33}{9} - \frac{20}{9} = \frac{33-20}{9} = \frac{13}{9} = 1\frac{4}{9}$$

$$(g) \frac{12}{130} - \frac{6}{130} = \frac{12-6}{130} = \frac{6}{130} = \frac{3}{65}$$

$$(h) 6\frac{7}{8} - 5\frac{4}{8} = \frac{55}{8} - \frac{44}{8} = \frac{55-44}{8} = \frac{11}{8} = 1\frac{3}{8}$$

### 4. Find the difference of the following:

$$(a) 6 \text{ and } 3\frac{4}{5} \\ = 6 \text{ and } \frac{19}{5} = \frac{6}{1} - \frac{19}{5} \\ = \frac{30-19}{5} = \frac{11}{5} = 2\frac{1}{5}$$

$$(b) \frac{9}{8} \text{ and } \frac{2}{12} = \frac{27-4}{24} = \frac{23}{24}$$

$$(c) \frac{7}{8} \text{ and } 3\frac{2}{4} = \frac{7}{8} - \frac{14}{4}$$

$$= \frac{7-28}{8} = \frac{21}{8} = 2\frac{5}{8}$$

$$(d) 15\frac{2}{8} \text{ and } 13\frac{2}{3} = \frac{122}{8} - \frac{41}{3}$$

$$= \frac{366-328}{24} = \frac{38}{24} = \frac{19}{12} = 1\frac{7}{12}$$

$$(e) 8\frac{6}{12} \text{ and } 5\frac{8}{8} = \frac{102}{12} - \frac{48}{8}$$

$$= \frac{204-144}{24} = \frac{60}{24} = \frac{5}{2} = 2\frac{1}{2}$$

$$(f) 4\frac{6}{7} \text{ and } 6\frac{2}{8} = \frac{34}{7} - \frac{50}{8}$$

$$= \frac{272-350}{56} = \frac{78}{56} = \frac{39}{28} = 1\frac{11}{28}$$

$$(g) 5\frac{2}{6} \text{ and } 7\frac{8}{9} = \frac{32}{6} - \frac{71}{9}$$

$$= \frac{96-142}{18} = \frac{46}{18} = \frac{23}{9} = 2\frac{5}{9}$$

$$(h) 3\frac{4}{5} \text{ and } 4\frac{4}{10} = \frac{19}{5} - \frac{44}{10}$$

$$= \frac{38-44}{10} = \frac{63}{10} = \frac{3}{5} = \frac{3}{5}$$

### 5. Simplify the following:

$$(a) \frac{5}{11} + \frac{8}{11} - \frac{2}{11}$$

$$= \frac{5+8-2}{11} = \frac{11}{11} = 1$$

$$(b) \frac{6}{13} - \frac{3}{13} + \frac{7}{13}$$

$$= \frac{6-3+7}{13} = \frac{10}{13} = \frac{10}{13}$$

$$(c) 10 - 3\frac{1}{5} - 5\frac{3}{10}$$

$$= \frac{10}{1} - \frac{16}{5} - \frac{53}{10}$$

$$= \frac{100-32-53}{10} = \frac{15}{10}$$

$$= \frac{3}{2} = 1\frac{1}{2}$$

$$(d) 4\frac{1}{2} - 2\frac{3}{4} - 1\frac{1}{4} = \frac{9}{2} - \frac{11}{4} - \frac{5}{4}$$

$$= \frac{18-11-5}{4} = \frac{2}{4} = \frac{1}{2}$$

$$(e) 7\frac{3}{4} + 6\frac{1}{2} - 5\frac{1}{2} - 6\frac{3}{8}$$

$$= \frac{31}{4} + \frac{13}{2} - \frac{11}{2} - \frac{51}{8}$$

$$= \frac{62+52-44-51}{8}$$

$$= \frac{114-95}{8} = \frac{19}{8} = 2\frac{3}{8}$$

$$(f) \frac{4}{9} - \frac{5}{12} + \frac{1}{2}$$

$$= \frac{16-15+18}{36} = \frac{19}{36}$$

$$(g) 2\frac{1}{3} + 3\frac{1}{6} - 1\frac{5}{12} = \frac{7}{3} + \frac{19}{6} - \frac{17}{12}$$

$$= \frac{28+38-17}{12} = \frac{49}{12} = 4\frac{1}{12}$$

$$(h) 3\frac{1}{4} + 2\frac{1}{4} - 5\frac{1}{2} = \frac{13}{4} + \frac{9}{4} - \frac{11}{2}$$

$$= \frac{13+9-22}{4} = \frac{0}{4} = 0$$

#### Exercise - 5.4

#### 1. Find the product:

$$(a) \frac{2}{3} \times 15 = \frac{2}{3} \times \frac{15}{1} = 10$$

$$(b) \frac{3}{9} \times 18 = \frac{3}{9} \times \frac{18}{1} = 6$$

$$(c) \frac{5}{8} \times \frac{24}{1} = 15$$

$$(d) \frac{4}{28} \times \frac{14}{1} = 2$$

$$(e) \frac{18}{22} \times \frac{33}{1} = \frac{18}{22} \times 33 = 27$$

$$(f) 5\frac{3}{4} \times 64 = \frac{23}{4} \times \frac{64}{1} = 368$$

$$(g) 14\frac{8}{9} \times 81 = \frac{134}{9} \times 81 = 1206$$

$$(h) 55 \times 1\frac{3}{5} = 55 \times \frac{8}{5} = 88$$

#### 2. Multiply the following:

$$(a) \frac{8}{4} \times \frac{8}{5} = \frac{64}{20} = \frac{16}{5} = 3\frac{1}{5}$$

$$(b) \frac{3}{6} \times \frac{12}{6} = \frac{36}{36} = 1$$

$$(c) \frac{6}{8} \times \frac{64}{54} = \frac{8}{9} = \frac{6}{9} \times \frac{64}{54} = \frac{8}{9}$$

$$(d) \frac{12}{25} \times \frac{5}{6} = \frac{2}{5}$$

$$(e) 5\frac{5}{15} \times 3\frac{5}{5}$$

$$= \frac{80}{15} \times \frac{20}{5} = \frac{64}{3} = 21\frac{1}{3}$$

$$(f) 5\frac{18}{25} \times 9\frac{2}{11} = \frac{143}{25} \times \frac{101}{11}$$

$$= \frac{14443}{275} = 52\frac{12}{25}$$

$$(g) 35\frac{6}{7} \times 1\frac{19}{22} = \frac{245}{7} \times \frac{41}{22}$$

$$= \frac{10291}{154} = 66\frac{27}{154}$$

$$(h) 4\frac{3}{5} \times 2\frac{5}{7} = \frac{23}{5} \times \frac{19}{7}$$

$$= \frac{437}{35} = 12\frac{17}{35}$$

#### 3. Find the following:

$$(a) \frac{1}{3} \text{ of } 15 = \frac{1}{3} \times 15 = 5$$

$$(b) \frac{1}{5} \text{ of } 105 = \frac{1}{5} \times \frac{105}{1} = 21$$

$$(c) \frac{5}{8} \text{ of } \frac{2}{25} = \frac{5}{8} \times \frac{2}{25} = \frac{2}{40} = \frac{1}{20}$$

$$(d) \frac{7}{12} \text{ of } \frac{36}{46} = \frac{7}{12} \times \frac{36}{46} = \frac{21}{46}$$

$$(e) \frac{4}{9} \text{ of } \frac{54}{64} = \frac{4}{9} \times \frac{54}{64} = \frac{4}{9} \times \frac{54}{64}$$

$$= \frac{6}{16} = \frac{3}{8}$$

$$(g) 6\frac{3}{11} \text{ of } 1\frac{1}{6} = \frac{69}{11} \times \frac{7}{6}$$

$$= \frac{69}{11} \times \frac{7}{62} = \frac{161}{22} = 7\frac{7}{22}$$

$$(h) 3\frac{1}{6} \text{ of } 3\frac{3}{11} = \frac{19}{6} \times \frac{36}{11}$$

$$= \frac{19}{6} \times \frac{36}{11} = \frac{114}{11} = 10\frac{4}{11}$$

**4. Find the reciprocal of following fraction:**

$$(a) 5 = \frac{1}{5} \quad (b) \frac{7}{11} = \frac{11}{7}$$

$$(c) \frac{8}{13} = \frac{13}{8} \quad (d) \frac{9}{16} = \frac{16}{9}$$

$$(e) \frac{4}{3} = \frac{3}{4} \quad (f) \frac{12}{18} = \frac{18}{12}$$

**5. Find the multiplicative measure each of the following:**

$$(a) 6 = \frac{1}{6} \quad (b) 11 = \frac{1}{11}$$

$$(c) \frac{22}{45} = \frac{45}{22} \quad (d) \frac{11}{19} = \frac{19}{11}$$

$$(e) \frac{16}{17} = \frac{3}{4} \quad (f) \frac{44}{65} = \frac{65}{44}$$

**6. Divide the following:**

$$(a) 16 \text{ by } \frac{4}{2} = \frac{16}{1} \div \frac{4}{2}$$

$$= \frac{16}{1} \times \frac{2}{4} = 8$$

$$(b) 84 \text{ by } \frac{6}{12} = 84 \div \frac{6}{12}$$

$$= 84 \times \frac{12}{6} = 168$$

$$(c) \frac{14}{145} \text{ by } \frac{84}{1} = \frac{17}{145} \div \frac{85}{1}$$

$$= \frac{17}{145} \times \frac{1}{85} = \frac{1}{725}$$

$$(d) \frac{4}{5} \text{ by } \frac{4}{1} = \frac{4}{5} \div \frac{4}{1} = \frac{4}{5} \times \frac{1}{4} = \frac{1}{5}$$

$$(e) \frac{2}{3} \text{ by } \frac{6}{11} = \frac{2}{3} \div \frac{6}{11}$$

$$= \frac{2}{3} \times \frac{11}{63} = \frac{11}{9} = 1\frac{2}{9}$$

$$(f) \frac{16}{21} \text{ by } \frac{4}{7} = \frac{16}{21} \div \frac{4}{7}$$

$$= \frac{16}{21} \times \frac{7}{4} = \frac{4}{3} = 1\frac{1}{3}$$

$$(g) \frac{1}{2} \text{ by } \frac{1}{4} = \frac{1}{2} \div \frac{1}{4} = \frac{1}{2} \times \frac{4}{1} = 2$$

$$(h) 2\frac{1}{4} \text{ by } 5\frac{6}{11} = \frac{9}{4} \div \frac{6}{11}$$

$$= \frac{9}{4} \times \frac{11}{61} = \frac{99}{244}$$

**Exercise - 5.5**

**Solve the following problems:**

1. Traveled by car =  $5\frac{1}{4}$

by bike =  $2\frac{1}{2}$

by foot =  $\frac{1}{8}$

$$\text{Total } 5\frac{1}{4} + 2\frac{1}{2} + \frac{1}{8} = \frac{21}{4} + \frac{5}{2} + \frac{1}{8}$$

$$= \frac{42 + 20 + 1}{8} = \frac{63}{8} = 7\frac{7}{8} \text{ km}$$

2. One pieces length =  $10\frac{2}{3}$

Two pieces length =  $15\frac{1}{4}$

Three pieces length =  $20\frac{1}{2}$

$$\text{Total } 10\frac{2}{3} + 15\frac{1}{4} + 20\frac{1}{2}$$

$$= \frac{32}{3} + \frac{61}{4} + \frac{41}{2}$$

$$= \frac{128 + 183 + 246}{12} = \frac{557}{12}$$

$$= \frac{557}{12} = 46\frac{5}{12}$$

3. The height of Priya = 140 cm

The height of Neelam =  $153\frac{1}{2}$  cm

$$= \frac{140}{1} - \frac{307}{2} = \frac{280 - 307}{2}$$

$$= \frac{27}{2} = 13\frac{1}{2} = \text{Neelam} = 13\frac{1}{2} \text{ cm}$$

4. Shop keeper had a sugar =  $6\frac{4}{9}$  kg

$$\text{Sold} = 4\frac{1}{18} \text{ kg}$$

$$\text{Left the sugar} = 6\frac{4}{9} - 4\frac{1}{18}$$

$$= \frac{58}{9} - \frac{73}{18} = \frac{116 - 73}{18}$$

$$= \frac{43}{18} = 2\frac{7}{18}$$

5. The cost of 1 liter petrol is =  $45\frac{1}{2}$  ₹

$$\text{The cost of } 5\frac{1}{2} \text{ liter} = 45\frac{1}{2} \times 5\frac{1}{2}$$

$$= \frac{91}{2} \times \frac{11}{2} = \frac{1001}{4} \text{ ₹} = 250\frac{1}{4}$$

6. The cost of 1 kg sugar =  $35\frac{1}{4}$  ₹

$$\text{The cost of } 18\frac{1}{2} \text{ kg} = 35\frac{1}{4} \times 18\frac{1}{2}$$

$$= \frac{141}{4} \times \frac{37}{2} = \frac{5177}{8} = 652\frac{1}{8}$$

$$\text{₹} = 652\frac{1}{8}$$

7. The cost of  $5\frac{1}{2}$  meter of cloth

$$\text{₹} = 210\frac{1}{2}$$

$$\text{One meter cost} = 210\frac{1}{2} \div 5\frac{1}{2}$$

$$= \frac{421}{2} \div \frac{11}{2} = \frac{421}{11} = \text{₹ } 38\frac{3}{4}$$

8. Train covers in 3 hours =  $105\frac{1}{4}$  m

$$\text{Train covers in 1 hours} = \frac{421}{4} \div \frac{3}{1}$$

$$= \frac{421}{4} \times \frac{1}{3} = \frac{421}{12} = 35\frac{1}{12} = 35\frac{1}{12}$$

9.  $15\frac{2}{3}$  to get  $20\frac{1}{2}$

$$= 20\frac{2}{3} - 15\frac{2}{3} = \frac{41}{3} - \frac{47}{3}$$

$$= \frac{123 - 94}{6} = \frac{29}{6} = 4\frac{5}{6}$$

$$\text{In added} = 4\frac{5}{6}$$

10. What should be subtracted

$$= 95\frac{1}{4} \text{ to get } 45\frac{1}{2}$$

$$= 95\frac{1}{4} - 45\frac{1}{2} = \frac{381}{4} - \frac{91}{2}$$

$$= \frac{381 - 182}{4} = \frac{199}{4}$$

$$\text{Subtracted} = 49\frac{3}{4}$$

11. Let the ether fraction be  $\frac{1}{x} \times 4$

$$\text{So, } \frac{1}{x} \times \frac{3}{4} = 8 = \frac{1}{x} = 8 \times \frac{4}{3}$$

$$= \frac{1}{x} \times \frac{32}{3} = x = \frac{3}{32}$$

$$\text{So the other fraction is } \frac{3}{32}$$

12. Total length of rope = 100 meter

$$\text{First part is} = 25\frac{1}{2}$$

$$\text{Second part} = 18\frac{1}{4}$$

$$\text{Third part} = 100 - 25\frac{1}{2} + 18\frac{1}{4}$$

$$= \frac{100}{1} - \frac{51}{2} + \frac{73}{4}$$

$$= \frac{400 - 102 + 734}{4} = \frac{225}{4} = 56\frac{1}{4}$$

$$\text{Third part} = 56\frac{1}{4}$$

## Chapter-6

### Exercise - 6.1

- (a) 3.538 (b) 73.013  
(c) 283.763 (d) 968.605  
(e) 6863.697 (f) 3867609  
(g) 0.964
- Write the following in words:**  
(a) Twenty six point three nine eight  
(b) Zero point six eight five four two  
(c) Eight six point five four two  
(d) Three hundred twenty seven point zero three six  
(e) Seventy two point eight three six  
(f) Twenty point six seven nine  
(g) Eight point zero zero one  
(h) One hundred sixty eight point seven zero five

- Write the place value of encircled digit in the following decimal number

- (a)  $\frac{5}{10}$  (b) 100 (c)  $\frac{7}{100}$   
(d)  $\frac{1}{1000}$  (e)  $\frac{9}{100}$  (f) 70  
(g)  $\frac{6}{10}$  (h)  $\frac{8}{100}$

- Write in expanded form:**

- (a)  $20 + 5 + \frac{6}{10} + \frac{2}{100}$   
(b)  $60 + 8 + \frac{2}{10} + \frac{7}{100}$   
(c)  $100 + 20 + 5 + \frac{8}{100} + \frac{6}{1000}$   
(d)  $100 + 60 + 2 + \frac{9}{10} + \frac{5}{1000}$   
(e)  $400 + 70 + 3 + \frac{4}{10} + \frac{7}{100} + \frac{3}{1000}$

$$(f) 2000 + 700 + 30 + 1\frac{7}{100} + \frac{3}{1000}$$

$$(g) 3000 + 200 + 50 + 1 + \frac{6}{100}$$

$$(h) 500 + 50 + 5 + \frac{5}{100}$$

- Write in short form:**

- (a) 45.123 (b) 9.067  
(c) 560.894 (d) 2432.689

### Exercise - 6.2

- Convert each of the following in to like decimals:**

- (a) 2.800, 3.670, 4.879  
(b) 8.83, 2.30, 6.28  
(c) 79.658, 73.700, 83.820  
(d) 83.628, 83,600, 83.620

- Put >, < or = in given boxes:**

- (a) < (b) < (c) > (d) = (e) = (f) <  
(g) = (h) <

- Arrange the following in ascending order:**

- (a)  $0.002 < 0.22 < 2.02 < 2.22 < 2.32$   
(b)  $2.002 < 2.003 < 2.02 < 2.2 < 2.22$   
(c)  $0.005 < 0.050 < 0.054 < 0.5 < 0.555$   
(d)  $0.687 < 6.87 < 67.8 < 67.8 < 68.7 < 8.6$

- Arrange the following in descending order:**

- (a)  $7.77 > 7.722 > 7.70 > 7.07 > 0.0077$   
(b)  $8.6 > 7.4 > 6.7 > 3.7 > 1.7$   
(c)  $297.6 > 29.76 > 29.67 > 2.976 > 0.2976$   
(d)  $55.52 > 55.5 > 55.05 > 5.55 > 0.555$

### Exercise - 6.3

#### 1. Add the following:

$$\begin{array}{r} \text{(a)} \quad 5.65 \\ \quad 3.896 \\ + 1.74 \\ \hline 11.286 \end{array} \quad \begin{array}{r} \text{(b)} \quad 36.4 \\ \quad 27.88 \\ + 09.686 \\ \hline 73.966 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 254.285 \\ \quad 3.786 \\ + 026.88 \\ \hline 283.951 \end{array} \quad \begin{array}{r} \text{(d)} \quad 345.6 \\ \quad 025.69 \\ + 008.887 \\ \hline 380.177 \end{array}$$

#### 2.

$$\begin{array}{r} \text{(a)} \quad 035.63 \\ \quad 028.3 \\ + 057.978 \\ \hline 121.908 \end{array} \quad \begin{array}{r} \text{(b)} \quad 02.83 \\ \quad 22.682 \\ + 47.02 \\ \hline 72.532 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 284.000 \\ \quad 384.653 \\ + 029.84 \\ \hline 698.493 \end{array} \quad \begin{array}{r} \text{(d)} \quad 295.286 \\ \quad 086.730 \\ + 730.83 \\ \hline 1112.846 \end{array}$$

$$\begin{array}{r} \text{(e)} \quad 5.00 \\ \quad 5.5 \\ + 555.555 \\ \hline 621.605 \end{array} \quad \begin{array}{r} \text{(f)} \quad 79.7 \\ \quad 882.83 \\ + 943.943 \\ \hline 0.43 \end{array}$$

#### 3. Subtract the following:

$$\begin{array}{r} \text{(a)} \quad 26.900 \\ \quad - 8.768 \\ \hline 18.132 \end{array} \quad \begin{array}{r} \text{(b)} \quad 364.868 \\ \quad - 26.250 \\ \hline 338.618 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 654.200 \\ \quad - 75.864 \\ \hline 578.336 \end{array} \quad \begin{array}{r} \text{(d)} \quad 73.698 \\ \quad - 26.250 \\ \hline 34.810 \end{array}$$

#### 4. Arrange in column and find difference:

$$\begin{array}{r} \text{(a)} \quad 200.00 \\ \quad - 75.43 \\ \hline 123.57 \end{array} \quad \begin{array}{r} \text{(b)} \quad 29.836 \\ \quad - 28.734 \\ \hline 1.102 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 234.002 \\ \quad - 46.868 \\ \hline 187.134 \end{array} \quad \begin{array}{r} \text{(d)} \quad 83.960 \\ \quad - 56.767 \\ \hline 27.193 \end{array}$$

$$\begin{array}{r} \text{(e)} \quad 800.000 \\ \quad - 683.938 \\ \hline 116.062 \end{array}$$

$$\begin{array}{r} \text{(f)} \quad 67.868 \\ \quad - 38.436 \\ \hline 29.432 \end{array}$$

#### 5. Simplify:

$$\begin{array}{r} \text{(a)} \quad 43.683 \\ \quad + 75.830 \\ \hline 119.513 \end{array} \quad \begin{array}{r} 119.513 \\ - 92.786 \\ \hline 26.727 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad 200.000 \\ \quad + 46.736 \\ \hline 246.736 \end{array} \quad \begin{array}{r} 246.736 \\ - 83.390 \\ \hline 163.346 \end{array}$$

$$\begin{array}{r} \text{(c)} \quad 88.880 \\ \quad + 36.493 \\ \hline 125.373 \end{array} \quad \begin{array}{r} 125.373 \\ - 44.550 \\ \hline 80.823 \end{array}$$

$$\begin{array}{r} \text{(d)} \quad 500.00 \\ \quad - 08.43 \\ \hline 491.57 \end{array} \quad \begin{array}{r} 491.57 \\ - 28.63 \\ \hline 462.94 \end{array}$$

$$\begin{array}{r} 462.94 \\ - 029.60 \\ \hline 433.34 \end{array}$$

$$\begin{array}{r} \text{(e)} \quad 46.63 \\ \quad + 92.43 \\ \hline 139.06 \end{array} \quad \begin{array}{r} 139.06 \\ - 73.65 \\ \hline 65.41 \end{array}$$

$$\begin{array}{r} \text{(f)} \quad 56.65 \\ \quad + 65.65 \\ \hline 122.30 \end{array} \quad \begin{array}{r} 122.30 \\ - 73.836 \\ \hline 48.464 \end{array}$$

$$\begin{array}{r} 6. \quad 1000 - 653.863 \\ \quad 1000.000 \\ \quad - 653.863 \\ \hline 346.137 \end{array}$$

$$\begin{array}{r} 7. \quad 73.630 \\ \quad - 26.898 \\ \hline 46.732 \end{array}$$

$$\begin{array}{r} 8. \quad 856.738 \\ \quad - 236.798 \\ \hline 619.940 \end{array}$$

So, the other no be

$$\begin{array}{r} 9. \quad 50.000 \\ \quad - 27.879 \\ \hline 22.121 \end{array}$$

1 water is left in the bucket

$$\begin{array}{r}
 10. \quad 73.90 \\
 + 26.88 \\
 \hline
 100.78
 \end{array}
 \qquad
 \begin{array}{r}
 100.780 \\
 - 36.896 \\
 \hline
 36.104
 \end{array}$$

### Exercise - 6.4

#### 1. Multiply the following:

$$\begin{array}{r}
 (a) \quad 23.6 \\
 \times 7 \\
 \hline
 165.2
 \end{array}
 \qquad
 \begin{array}{r}
 (b) \quad 35.43 \\
 \times 8 \\
 \hline
 283.44
 \end{array}$$

$$\begin{array}{r}
 (c) \quad 364.23 \\
 \times 8 \\
 \hline
 2913.84
 \end{array}
 \qquad
 \begin{array}{r}
 (d) \quad 2.35 \\
 \times 22 \\
 \hline
 740 \\
 273 \times \\
 \hline
 38.22
 \end{array}$$

$$\begin{array}{r}
 (e) \quad 2.73 \\
 \times 14 \\
 \hline
 1092 \\
 273 \times \\
 \hline
 38.22
 \end{array}
 \qquad
 \begin{array}{r}
 (f) \quad 26.56 \\
 \times 29 \\
 \hline
 23904 \\
 5312 \times \\
 \hline
 770.24
 \end{array}$$

$$\begin{array}{r}
 (g) \quad 27.43 \\
 \times 32 \\
 \hline
 5486 \\
 8229 \times \\
 \hline
 877.76
 \end{array}
 \qquad
 \begin{array}{r}
 (h) \quad 54.33 \\
 \times 726 \\
 \hline
 32598 \\
 10866 \times \\
 38031 \times \times \\
 \hline
 39443.58
 \end{array}$$

$$\begin{array}{r}
 (i) \quad 33.53 \\
 \times 928 \\
 \hline
 26624 \\
 6506 \times \\
 30177 \times \times \\
 \hline
 31093.84
 \end{array}
 \qquad
 \begin{array}{r}
 (j) \quad 2.73 \\
 \times 626 \\
 \hline
 1638 \\
 546 \times \\
 1638 \times \times \\
 \hline
 1708.98
 \end{array}$$

$$\begin{array}{r}
 (k) \quad 3.48 \\
 \times 706 \\
 \hline
 2088 \\
 000 \times \\
 2436 \times \times \\
 \hline
 2456.88
 \end{array}
 \qquad
 \begin{array}{r}
 (l) \quad 26.99 \\
 \times 839 \\
 \hline
 24291 \\
 8097 \\
 \times \\
 21592 \times \times \\
 \hline
 22642.61
 \end{array}$$

#### 2. Find the product:

$$\begin{array}{r}
 (a) \quad 32.8 \\
 \times 2.6 \\
 \hline
 1968 \\
 656 \times \\
 \hline
 85.28
 \end{array}
 \qquad
 \begin{array}{r}
 (b) \quad 27.38 \\
 \times 3.32 \\
 \hline
 5506 \\
 8214 \times \\
 8314 \times \times \\
 \hline
 90.9046
 \end{array}$$

$$\begin{array}{r}
 (c) \quad 2.462 \\
 \times 2.680 \\
 \hline
 0000 \\
 19696 \times \\
 14772 \times \times \\
 4924 \times \times \times \\
 \hline
 65.98160
 \end{array}
 \qquad
 \begin{array}{r}
 (d) \quad 7.836 \\
 \times 2.340 \\
 \hline
 0000 \\
 21344 \times \\
 23508 \times \times \\
 15672 \times \times \times \\
 \hline
 18.236240
 \end{array}$$

$$\begin{array}{r}
 (e) \quad 28.95 \\
 \times 4.72 \\
 \hline
 5790 \\
 20265 \times \\
 11580 \times \times \\
 \hline
 136.6440
 \end{array}
 \qquad
 \begin{array}{r}
 (f) \quad 60.32 \\
 \times 2.87 \\
 \hline
 42224 \\
 48256 \times \\
 12064 \times \times \\
 \hline
 173.1184
 \end{array}$$

$$\begin{array}{r}
 (g) \quad 7.460 \\
 \times 3.830 \\
 \hline
 0000 \\
 22380 \times \\
 59680 \times \times \\
 22380 \times \times \times \\
 28.571800 \\
 \hline
 28.571800
 \end{array}
 \qquad
 \begin{array}{r}
 (h) \quad 0.003 \\
 \times 0.002 \\
 \hline
 0006 \\
 0000 \times \\
 0000 \times \times \\
 0000 \times \times \times \\
 00.00006 \\
 \hline
 00.00006
 \end{array}$$

$$\begin{array}{r}
 (i) \quad 7.643 \\
 \times 0.340 \\
 \hline
 0000 \\
 30572 \times \\
 22929 \times \times \\
 2.598620 \\
 \hline
 2.598620
 \end{array}
 \qquad
 \begin{array}{r}
 (j) \quad 2.84 \\
 \times 3.40 \\
 \hline
 1136 \\
 1972 \times \\
 852 \times \times \\
 106056 \\
 \hline
 106056
 \end{array}$$

(k) & (l) Do same as above.

#### 3. Fill in the blanks:

- (a) 23830      (b) 2883400  
 (c) 786      (d) 74320  
 (e) 6543      (f) 0.88  
 (g) 2200      (h) 80080

#### 4. Simplify

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} 7.6 \\ \times 8.3 \\ \hline 228 \\ 608 \times \\ \hline 63.08 \end{array} \qquad \begin{array}{r} 63.08 \\ \times 2.90 \\ \hline 0000 \\ 56772 \times \\ 12616 \times \times \\ \hline 182.9320 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(b)} \quad \begin{array}{r} 22.80 \\ \times 2.28 \\ \hline 18240 \\ 4560 \times \\ 4560 \times \times \\ \hline 51.9840 \end{array} \qquad \begin{array}{r} 51.9840 \\ \times 0.2800 \\ \hline 000000 \\ 000000 \times \\ 4158720 \times \times \\ 1039680 \times \times \times \\ 000000 \times \times \times \times \\ \hline 14.5552000 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} 7.6 \\ \times 7.6 \\ \hline 456 \\ 532 \times \\ \hline 57.76 \end{array} \qquad \begin{array}{r} 57.76 \\ \times 8.32 \\ \hline 11552 \\ 17328 \times \\ 46208 \times \times \\ \hline 480.5632 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(d)} \quad \begin{array}{r} 30.30 \\ \times 3.03 \\ \hline 9090 \\ 0000 \times \\ 9090 \times \times \\ 91.8090 \end{array} \qquad \begin{array}{r} 91.8090 \\ \times 0.3030 \\ \hline 000000 \\ 2754270 \times \\ 000000 \times \times \\ 2754270 \times \times \times \\ 000000 \times \times \times \times \\ \hline 27.81812700 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(e)} \quad \begin{array}{r} 6.6 \\ \times 5.5 \\ \hline 330 \\ 330 \times \\ \hline 36.30 \end{array} \qquad \begin{array}{r} 36.30 \\ \times 4.40 \\ \hline 0000 \\ 14520 \times \\ 14520 \times \times \\ \hline 159.7200 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(f)} \quad \begin{array}{r} 7.873 \\ \times 2.900 \\ \hline 0000 \\ 0000 \times \\ 70587 \times \times \\ 15746 \times \times \times \\ \hline 22.831700 \end{array} \qquad \begin{array}{r} 22.831700 \\ \times 9.020000 \\ \hline 00000000 \\ 00000000 \times \\ 00000000 \times \times \\ 00000000 \times \times \times \\ 00000000 \times \times \times \times \\ 45663400 \times \times \times \times \\ 00000000 \times \times \times \times \times \\ 203485300 \times \times \times \times \times \times \\ \hline 203.941934000000 \end{array}
 \end{array}$$

#### Exercise - 6.5

$$\begin{array}{ll}
 \text{(a)} 686 \div 2 = 34.3 & \text{(b)} 39.42 \div 3 = 13.14 \\
 2 \overline{)68.6} (34.3 & 3 \overline{)39.42} (13.14 \\
 \begin{array}{r} 6 \downarrow \\ 8 \\ 8 \downarrow \\ 6 \\ 6 \\ \times \end{array} & \begin{array}{r} 3 \downarrow \\ 9 \\ 9 \downarrow \\ 4 \\ 3 \downarrow \\ 12 \\ 12 \\ \times \end{array}
 \end{array}$$

$$\begin{array}{l}
 \text{(c)} 53.60 \div 4 = 13.40 \\
 4 \overline{)53.60} (13.40 \\
 \begin{array}{r} 4 \downarrow \\ 13 \\ 12 \downarrow \\ 16 \\ 16 \\ \times \end{array}
 \end{array}$$

$$\text{(d)} 15.60 \div 11 = 1.42$$

$$\begin{array}{r}
 11 \overline{)15.62} (1.42 \\
 \underline{11} \downarrow \\
 46 \downarrow \\
 \underline{44} \downarrow \\
 22 \downarrow \\
 \underline{22} \\
 \times
 \end{array}$$

(e)  $140.40 \div 15 = 93.6$

$$\begin{array}{r}
 15 \overline{)140.40} (1.42 \\
 \underline{135} \downarrow \\
 54 \downarrow \\
 \underline{45} \downarrow \\
 90 \downarrow \\
 \underline{90} \\
 \times
 \end{array}$$

(f)  $42.84 \div 18 = 2.3824$

$$\begin{array}{r}
 18 \overline{)42.84} (2.3824 \\
 \underline{36} \downarrow \\
 68 \downarrow \\
 \underline{54} \downarrow \\
 148 \downarrow \\
 \underline{144} \\
 44 \downarrow \\
 \underline{36} \\
 80 \downarrow \\
 \underline{72} \\
 10
 \end{array}$$

(g)  $159.069 \div 17 = 93.59229$

$$\begin{array}{r}
 17 \overline{)159.069} (93.59229 \\
 \underline{153} \downarrow \\
 60 \downarrow \\
 \underline{51} \downarrow \\
 96 \downarrow \\
 \underline{85} \downarrow \\
 119
 \end{array}$$

(h)  $117.678 \div 22 = 5.349$

$$\begin{array}{r}
 22 \overline{)117.678} (5.349 \\
 \underline{110} \downarrow \\
 76 \downarrow \\
 \underline{66} \downarrow \\
 107 \downarrow \\
 \underline{88} \downarrow \\
 198 \downarrow \\
 \underline{198} \\
 \times
 \end{array}$$

(i)  $0.08 \div 10 = 0.008$

$$\begin{array}{r}
 10 \overline{)0.08} (0.08 \\
 \underline{80} \\
 \times
 \end{array}$$

(j)  $13.32 \div 24 = 0.555$

$$\begin{array}{r}
 24 \overline{)13.32} (0.555 \\
 \underline{120} \downarrow \\
 132 \downarrow \\
 \underline{120} \downarrow \\
 120 \downarrow \\
 \underline{120} \\
 \times
 \end{array}$$

(k)  $0.056 \div 7 = 0.08$

$$\begin{array}{r}
 07 \overline{)0.056} (0.08 \\
 \underline{00.56} \\
 000 \times
 \end{array}$$

(l)  $1.900 \div 25 = 0.60$

$$\begin{array}{r}
 25 \overline{)1.900} (0.60 \\
 \underline{90} \\
 0
 \end{array}$$

## 2. Divide the following:

(a)  $1.9498 \div 125$

$= 0.0156$

$$\begin{array}{r}
 125 \overline{)1.9498} (0.0156 \\
 \underline{125} \downarrow \\
 699 \downarrow \\
 \underline{625} \downarrow \\
 748 \downarrow \\
 \underline{625} \\
 123
 \end{array}$$

$$(b) 7.84 \div 2.8$$

We have  $7.84 \div 2.8$

$$= \frac{784}{28} \times \frac{10}{100}$$

$$= \frac{784}{28 \times 10} = \frac{78.4}{28}$$

$$= 2.8$$

$$\begin{array}{r} 28 \overline{) 78.4} \quad (2.8 \\ \underline{56} \downarrow \\ 224 \\ \underline{224} \\ 0 \\ \times \end{array}$$

$$(c) 0.0448 \div 0.4$$

$$= \frac{0.0448}{0.4} \times \frac{10}{10000}$$

$$= \frac{0.448}{4} = 0.112$$

$$\begin{array}{r} 4 \overline{) 0.448} \quad (0.112 \\ \underline{4} \downarrow \\ 4 \downarrow \\ 8 \\ \underline{8} \\ 0 \\ \times \end{array}$$

$$(d) 6.43 \div 0.643$$

$$= \frac{6.43}{0.643} \times \frac{1000}{100} = \frac{6430}{643} = 10$$

$$\begin{array}{r} 643 \overline{) 6430} \quad (10 \\ \underline{643} \\ 0 \\ \times \end{array}$$

$$(e) 999.9 \div 1.1$$

$$= \frac{999.9}{1.1} \times \frac{10}{10} = \frac{9999}{11} = 909$$

$$\begin{array}{r} 11 \overline{) 9999} \quad (909 \\ \underline{99} \downarrow \\ 99 \\ \underline{99} \\ 0 \\ \times \end{array}$$

$$(f) 10.515 \div 1.5$$

$$= \frac{10515}{15} \times \frac{10}{1000}$$

$$= \frac{10515}{15} \times 100$$

$$= \frac{10515}{15} = 701$$

$$\begin{array}{r} 015 \overline{) 105.15} \quad (70.7 \\ \underline{105} \downarrow \\ 000.15 \\ \underline{000.15} \\ 000. \times \end{array}$$

$$(g) 5653.75 \div 12.5$$

$$= \frac{5653.75}{12.5} \times \frac{10}{100}$$

$$= \frac{56537.5}{125} = 452.3$$

$$\begin{array}{r} 125 \overline{) 56537.5} \quad (452.3 \\ \underline{500} \downarrow \\ 653 \downarrow \\ \underline{625} \downarrow \\ 287 \downarrow \\ \underline{250} \downarrow \\ 375 \\ \underline{375} \\ 0 \\ \times \end{array}$$

$$(h) 56.192 \div 1.6$$

$$= \frac{56.192}{1.6} \times \frac{10}{1000}$$

$$= \frac{561.92}{16} = 35.12$$

$$\begin{array}{r} 016 \overline{) 561.92} \quad (35.12 \\ \underline{48} \downarrow \\ 081 \downarrow \\ \underline{080} \downarrow \\ 0019 \downarrow \\ \underline{0016} \downarrow \\ 000.32 \\ \underline{000.32} \\ 000. \times \end{array}$$

$$\begin{aligned} \text{(i)} \quad & 7.84 \div 5.6 \\ &= \frac{784}{56} \times \frac{10}{100} \\ &= \frac{78.4}{56} \end{aligned}$$

$$\begin{array}{r} 56 \overline{)78.4} \quad (1.4 \\ \underline{56} \phantom{.} \phantom{0} \\ 22 \phantom{4} \phantom{0} \\ \underline{22} \phantom{4} \phantom{0} \\ 22 \phantom{4} \phantom{0} \\ \underline{\phantom{22}4} \phantom{0} \\ \phantom{22}4 \phantom{0} \\ \underline{\phantom{22}4} \phantom{0} \\ \phantom{22}0 \phantom{0} \end{array}$$

$$\begin{aligned} \text{(j)} \quad & 0.196 \div 1.4 \\ &= \frac{0.196}{1.4} \times \frac{10}{1000} = \frac{196}{14} = 0.14 \end{aligned}$$

$$\begin{array}{r} 14 \overline{)1.96} \quad (0.14 \\ \underline{14} \phantom{0} \phantom{0} \\ 56 \phantom{0} \phantom{0} \\ \underline{56} \phantom{0} \phantom{0} \\ 56 \phantom{0} \phantom{0} \\ \underline{\phantom{56}0} \phantom{0} \\ \phantom{56}0 \phantom{0} \end{array}$$

$$\text{(k)} \quad 89.5 \div 17.9 = 5$$

$$\begin{array}{r} 17.9 \overline{)89.5} \quad (5 \\ \underline{895} \phantom{0} \\ \phantom{895}0 \phantom{0} \end{array}$$

$$\begin{aligned} \text{(l)} \quad & 131.58 \div 2.15 \\ &= \frac{13158}{215} \times \frac{100}{100} = \frac{13158}{215} = 61.2 \end{aligned}$$

$$\begin{array}{r} 215 \overline{)13158} \quad (61.2 \\ \underline{1290} \phantom{0} \phantom{0} \\ 258 \phantom{0} \phantom{0} \\ \underline{215} \phantom{0} \phantom{0} \\ 430 \phantom{0} \phantom{0} \\ \underline{430} \phantom{0} \phantom{0} \\ \phantom{430}0 \phantom{0} \end{array}$$

### Exercise - 6.6

- Ravi used milk for tea = 26.736 l  
He used sweets = 40.760 l  
He used milk for other = 4.679  
72.175 l

Thus Ravi used 72.175 l milk in a day

$$2. \text{ Price of a book} = ₹ \quad 73.86$$

$$\text{Price of a book} = ₹ \quad 286.60$$

$$\text{Price of stationary} ₹ \quad 479.36$$

$$\underline{839.82}$$

₹ 839.82 amount student have pay to purchasing all

$$3. \text{ Height of Aditi} = 1.90 \text{ m}$$

$$\text{Height of Diksha} = 1.30 \text{ m}$$

$$\underline{0.60 \text{ m}}$$

Aditi is 0.60 m taller than Diksha

$$4. \text{ Total length of a wire} = 228.76 \text{ m}$$

$$\text{Out of it cut off} = 69.87 \text{ m}$$

$$\underline{158.89}$$

$$5. \text{ Required cloth for sewing a kurti} = 3.35$$

$$\text{Required cloth 35 such kurti} = 35$$

$$3.35$$

$$\times 35$$

$$\underline{1675}$$

$$1005 \times$$

$$\underline{117.25}$$

So, 117.25 m cloth required for 35 kurti

$$\text{Cost of 1 m cloth} = ₹ 89.55$$

$$\text{Cost of 117.25 m cloth} = 117.25 \times ₹ 89.55 = ₹ 10,499.73$$

$$6. \text{ Let the second number be } x$$

$$1.01 \times x = 53.14721$$

$$x = \frac{53.14721}{1.01} \times \frac{100}{100000}$$

$$= \frac{5314.721}{101} = 52.621$$

$$7. 14.125 \div 25 = ₹ 0.565$$

## Chapter-7

### Exercise - 7.1

- Round each of the following numbers to the nearest 10:

(a) 40 (b) 90 (c) 240 (d) 390

- (e) 490 (f) 96 (g) 4570 (h) 4040  
 (i) 5980 (j) 2080 (k) 8430 (l) 5840  
 (m) 2975 (n) 2860 (o) 7700  
 (p) 92390

**2. Round each of the following numbers of the nearest 100:**

- (a) 6000 (b) 1000 (c) 800 (d) 600  
 (e) 490 (f) 800 (g) 8600 (h) 8000  
 (i) 1600 (j) 1100 (k) 8500 (l) 7800  
 (m) 39700 (n) 99000 (o) 9800  
 (p) 8900

**3. Round each of the following numbers of the nearest 1000:**

- (a) 6000 (b) 5000 (c) 3000  
 (d) 3000 (e) 9000 (f) 10000  
 (g) 29000 (h) 38000 (i) 46000  
 (j) 53000 (k) 48000 (l) 38000  
 (m) 40000 (n) 50000  
 (o) 69000 (p) 89000

**4. Round each of the following numbers of the nearest 10000:**

- (a) 10000 (b) 30000 (c) 40000  
 (d) 50000 (e) 60000 (f) 70000  
 (g) 80000 (h) 90000 (i) 600000  
 (j) 70000 (k) 90000 (l) 90000  
 (m) 80000 (n) 70000 (o) 40000  
 (p) 70000

**Exercise - 7.2**

**1. Round each of the following decimals the nearest ones:**

- (a) 7.0 (b) 7.0 (c) 35.0 (d) 69.0  
 (e) 54.0 (f) 84.0 (g) 269.0  
 (h) 374.0 (i) 684.0 (j) 76.0 (k) 396.0

**2. Round each of the following decimals of the nearest tenths:**

- (a) 6.80 (b) 7.40 (c) 534.70  
 (d) 769.40 (e) 954.40 (f) 767.60  
 (g) 684.20 (h) 268.30 (i) 374.40  
 (j) 683.70 (k) 276.80 (l) 395.60

**3. Round each of the following decimals of the nearest hundredths:**

- (a) 6.880 (b) 7.350 (c) 34.680

- (d) 69.380 (e) 554.420 (f) 867.790  
 (g) 784.940 (h) 268.940 (i) 374.390  
 (j) 683.700 (k) 276.480 (l) 395.630

**4. Round each of the following decimals of the nearest thousandths:**

- (a) 6.8390 (b) 7.3210  
 (c) 34.6780 (d) 69.3880  
 (e) 54.4240 (f) 267.7880  
 (g) 584.2080 (h) 268.9280  
 (i) 374.3810 (j) 683.6920  
 (k) 276.4860 (l) 395.628

**Chapter-8**

**Exercise - 8.1**

**1. Choose the:**

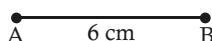
1. a 2. b 3. c  
 4. b 5. b

**2. True and false:**

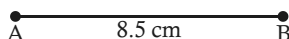
- (a) False (b) False (c) True  
 (d) False (e) True

**3. Draw the line segment:**

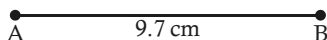
(a)



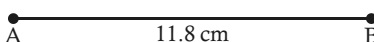
(b)



(c)



(d)



**4. Measure the length of following line segment:**

- (a) 3 cm (b) 3.5 cm (c) 2.3 cm

**5. Match the following:**

- $a \rightarrow 3, b \rightarrow 4, c \rightarrow 5, d \rightarrow 2, e \rightarrow 1$

**Exercise - 8.2**

1. (a) Yes (b) Yes (c) Yes (d) No

**2. Write the name of arms, vertex and**

angles in each of the following:

(a) Arms  $\rightarrow OP$  and  $OQ$ , Angle  $\rightarrow \angle POQ$

Vertex  $\rightarrow O$

(b) Arms  $\rightarrow AB$  and  $BC$ , Angle  $\rightarrow \angle ABC$

Vertex  $\rightarrow B$

(c) Arms  $\rightarrow XY$  and  $YZ$ , Angle  $\rightarrow \angle XYZ$

Vertex  $\rightarrow Y$

(d) Arms  $\rightarrow NO$  and  $NP$  Angle  $\rightarrow \angle PNO$

Vertex  $\rightarrow N$

**3. How many angles are formed in each of the following figures? Also write the name of angles:**

(a) 3,  $\angle AOC$ ,  $\angle BOC$ ,  $\angle AOB$

(b) 6,  $\angle POT$ ,  $\angle TOS$ ,  $\angle SOB$ ,  $\angle PQS$ ,  $\angle TQB$ ,  $\angle PQB$

(c) 9,  $\angle XYR$ ,  $\angle RYQ$ ,  $\angle QYP$ ,  $\angle PYZ$ ,  $\angle XYQ$ ,  $\angle XYZ$ ,  $\angle RYP$ ,  $\angle RYZ$ ,  $\angle QYZ$

**4. In the adjoining figures, name the all angles:**

(a)  $\angle A$ ,  $\angle B$ ,  $\angle C$ ,  $\angle D$

(b)  $\angle P$ ,  $\angle Q$ ,  $\angle R$

(c)  $\angle A$ ,  $\angle B$ ,  $\angle C$ ,  $\angle D$ ,  $\angle E$

(d)  $\angle P$ ,  $\angle Q$ ,  $\angle R$ ,  $\angle S$

**5. In the adjoining figures, name the points:**

(a) O, I, J

(b) J, H, E, K, A, F, C

**Exercise - 8.3**

**1. Classify the angles on the basis of their measures:**

(a) Acute angle (b) Acute angle

(c) Right angle (d) Zero angle

(e) Obtuse angle (f) Right angle

(g) Complete angle

(h) Acute angle (i) Acute angle

(j) Obtuse angle (k) Right angle

(m) Acute angle (n) Obtuse angle

**2. Which of the following pairs of angles are complementary:**

(a)  $50^\circ + 40^\circ = 90^\circ$  (Yes)

(b)  $49^\circ + 20^\circ = 69^\circ$  (No)

(c)  $45^\circ + 35^\circ = 80^\circ$  (No)

(d)  $81^\circ + 9^\circ = 90^\circ$  (Yes)

(e)  $60^\circ + 30^\circ = 90^\circ$  (Yes)

(f)  $20^\circ + 75^\circ = 95^\circ$  (No)

(g)  $25^\circ + 70^\circ = 95^\circ$  (No)

(h)  $90^\circ + 0^\circ = 90^\circ$  (Yes)

(i)  $27^\circ + 23^\circ = 50^\circ$  (No)

(j)  $45^\circ + 44^\circ = 85^\circ$  (No)

**3. Which of the following pairs of angles are supplementary:**

(a)  $130^\circ + 70^\circ = 200^\circ$  (No)

(b)  $120^\circ + 160^\circ = 280^\circ$  (No)

(c)  $135^\circ + 45^\circ = 180^\circ$  (Yes)

(d)  $140^\circ + 20^\circ = 160^\circ$  (No)

(e)  $170^\circ + 20^\circ = 190^\circ$  (No)

(f)  $55^\circ + 145^\circ = 200^\circ$  (No)

(g)  $180^\circ + 40^\circ = 220^\circ$  (No)

**4. Find the complement each the following:**

(a) Complement of  $40^\circ$   
 $= 90^\circ - 40^\circ = 50^\circ$

(b) Complement of  $55^\circ$   
 $= 90^\circ - 55^\circ = 35^\circ$

(c) Complement of  $70^\circ$   
 $= 90^\circ - 70^\circ = 20^\circ$

(d) Complement of  $80^\circ$   
 $= 90^\circ - 80^\circ = 10^\circ$

(e) Complement of  $50^\circ$   
 $= 90^\circ - 50^\circ = 40^\circ$

(f) Complement of  $90^\circ$   
 $= 90^\circ - 90^\circ = 0$

(g) Complement of  $80^\circ$   
 $= 90^\circ - 82^\circ = 8^\circ$

(h) Complement of  $75^\circ$   
 $= 90^\circ - 75^\circ = 15^\circ$

(i) Complement of  $37^\circ$   
 $= 90^\circ - 37^\circ = 53^\circ$

(j) Complement of  $30^\circ$   
 $= 90^\circ - 30^\circ = 60^\circ$

(k) Complement of  $60^\circ$   
 $= 90^\circ - 60^\circ = 30^\circ$

- (l) Complement of  $25^\circ$   
 $= 90^\circ - 25^\circ = 65^\circ$   
 (m) Complement of  $80^\circ$   
 $= 90^\circ - 80^\circ = 10^\circ$   
 (n) Complement of  $6^\circ$   
 $= 90^\circ - 6^\circ = 84^\circ$

**5. Find the supplementary:**

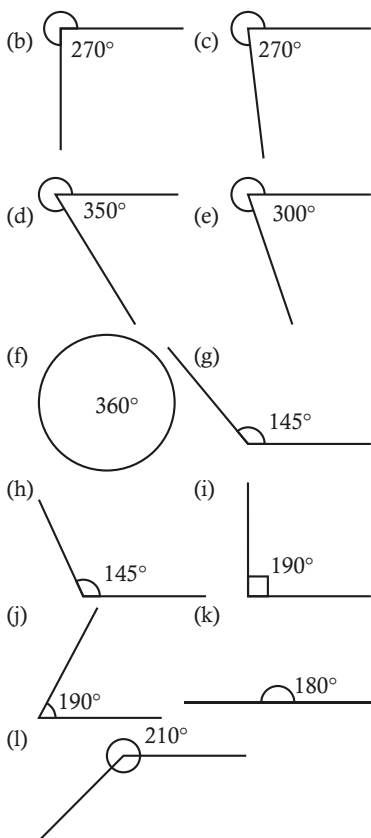
- (a) Supplementary of  $130^\circ$   
 $= 180^\circ - 130^\circ = 50^\circ$   
 (b) Supplementary of  $180^\circ$   
 $= 180^\circ - 180^\circ = 0^\circ$   
 (c) Supplementary of  $100^\circ$   
 $= 180^\circ - 100^\circ = 80^\circ$   
 (d) Supplementary of  $80^\circ$   
 $= 180^\circ - 80^\circ = 100^\circ$   
 (e) Supplementary of  $185^\circ$   
 $= 180^\circ - 185^\circ = -5^\circ$   
 (f) Supplementary of  $172^\circ$   
 $= 180^\circ - 172^\circ = 8^\circ$   
 (g) Supplementary of  $55^\circ$   
 $= 180^\circ - 55^\circ = 125^\circ$   
 (h) Supplementary of  $170^\circ$   
 $= 180^\circ - 170^\circ = 10^\circ$   
 (i) Supplementary of  $90^\circ$   
 $= 180^\circ - 90^\circ = 90^\circ$   
 (j) Supplementary of  $140^\circ$   
 $= 180^\circ - 140^\circ = 40^\circ$   
 (k) Supplementary of  $140^\circ$   
 $= 180^\circ - 140^\circ = 40^\circ$   
 (l) Supplementary of  $40^\circ$   
 $= 180^\circ - 40^\circ = 140^\circ$   
 (m) Supplementary of  $35^\circ$   
 $= 180^\circ - 35^\circ = 145^\circ$   
 (n) Supplementary of  $88^\circ$   
 $= 180^\circ - 88^\circ = 92^\circ$

**6. Measure the following angles with the help of protractor:**

- (a)  $60^\circ$  (b)  $120^\circ$  (c)  $90^\circ$  (d)  $270^\circ$   
 (e)  $260^\circ$  (f)  $240^\circ$

**7. Draw the following angles:**

- (a)



**Exercise - 8.4**

**1. In given rectangle write the relation between:**

- (a) = (b) = (c) < (d) < (e) < (f) =

2. (a)  $AB \parallel PQ$ ,  $AP \parallel BQ$ ,  $PQ \parallel SR$ ,  
 $PS \parallel QR$ ,  $BQ \parallel RC$ ,  $QR \parallel BC$   
 $PS \parallel AD$ ,  $SD \parallel CR$ ,  $DC \parallel AB$   
 $DC \parallel SR$ ,  $AP \parallel DS$ ,  $BC \parallel AD$   
 (b)  $AD \perp AB$ ,  $AD \perp AC$ ,  $AD \perp$   
 $DC$   $BC \perp BQ$

3. (a) Parallel (b)  $90^\circ$  (c) Constant  
 (d) Interaction point (e) OW

4. (a)  $PQ \parallel RS$ , and  $AB \parallel CD$ ,  
 (b)  $PQ$  AND  $AB$ ,  $PQ$  AND  $CD$   
 (c) O , E, G, F

## Chapter-9

### Exercise - 9.1

- Right angle Triangle
  - Obtuse angle Triangle
  - Acute angle Triangle
  - Acute angle Triangle
  - Acute angle Triangle
- $80^\circ + 110^\circ + 30^\circ = 180^\circ$   
 $220^\circ \neq 180^\circ$  (No)
  - $80^\circ + 55^\circ + 45^\circ = 180^\circ$   
 $80^\circ + 100^\circ = 180^\circ$   
 $180^\circ = 180^\circ$  (Yes)
  - $90^\circ + 40^\circ + 50^\circ = 180^\circ$   
 $180^\circ = 180^\circ$
  - $70^\circ + 7^\circ + 45^\circ = 180^\circ$   
 $122^\circ \neq 180^\circ$  (No)
- $\angle A + \angle B + \angle C = 180^\circ$   
 $90^\circ + 35^\circ + \angle C = 180^\circ$   
 $125^\circ + \angle C = 180^\circ$   
 $\angle C = 180^\circ - 125^\circ$   $\angle C = 55^\circ$
  - $\angle X + \angle Y + \angle Z = 180^\circ$   
 $60^\circ + 60^\circ + \angle Z = 180^\circ$   
 $120^\circ + \angle Z = 180^\circ$   
 $\angle Z = 180^\circ - 120^\circ$   $\angle Z = 60^\circ$
  - $\angle M + \angle N + \angle O = 180^\circ$   
 $\angle M + 30^\circ + 120^\circ = 180^\circ$   
 $\angle M + 180^\circ = 150^\circ$   $\angle M = 30^\circ$
  - $\angle P + \angle Q + \angle R = 180^\circ$   
 $\angle P + 30^\circ + 35^\circ = 180^\circ$   
 $\angle P + 65^\circ = 180^\circ$   
 $\angle P = 180^\circ - 65^\circ$   $\angle P = 125^\circ$
  - $\angle E + \angle F + \angle G = 180^\circ$   
 $45^\circ + 55^\circ + \angle G = 180^\circ$   
 $100^\circ + \angle G = 180^\circ$   
 $\angle G = 180^\circ - 100^\circ$   $\angle G = 80^\circ$
  - $\angle E + \angle F + \angle D = 180^\circ$   
 $35^\circ + 120^\circ + \angle D = 180^\circ$   
 $\angle D = 180^\circ - 155^\circ$   $\angle D = 25^\circ$
- 3
  - 1
  - 1

### Exercise 9.2

- Scalene triangle
  - Equilateral triangle
  - Isosceles triangle
  - Isosceles triangle

- Scalene triangle
- Equilateral triangle

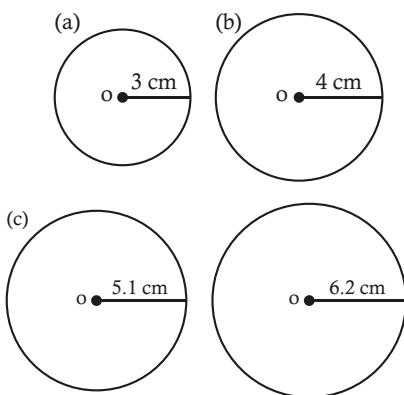
- $9 + 8 \leq 6$   $17 < 6$  (Yes)
  - $6 + 11 > 12$   $17 < 12$  (Yes)
  - $7 + 8 > 7$   $15 < 7$  (Yes)
  - $6 + 6 > 6$   $12 < 6$  (Yes)
- True
  - False
  - False
  - False
  - True

4.

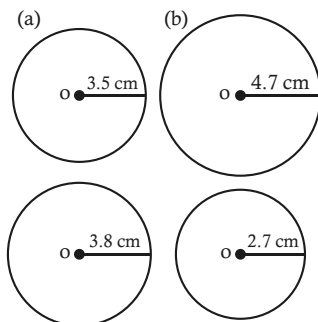
| Name of triangle         | Relation b/w sides     | Relation b/w angles    |
|--------------------------|------------------------|------------------------|
| (a) Scalene triangle     | Different              | Different              |
| (b) Isosceles triangle   | Two angles are equal   | Two angles are equal   |
| (c) Equilateral triangle | Three angles are equal | Three angles are equal |

### Exercise 9.3

1.



2.



3. Radius: OA, OB, OC, OD, OP

Diameter: AC, DB

4. Chords: EF, CB, CA, AB

5. (a) Diameter =  $2 \times \text{radius}$

$$= 2 \times 6 = 12 \text{ cm}$$

(b) Diameter =  $2 \times \text{radius}$

$$= 2 \times 7 = 14 \text{ cm}$$

(c) Diameter =  $2 \times \text{radius}$

$$= 2 \times 9.4 = 18.8 \text{ cm}$$

(d) Diameter =  $2 \times \text{radius}$

$$= 2 \times 8.5 = 16.0 \text{ cm}$$

(e) Diameter =  $2 \times \text{radius}$

$$= 2 \times 10.7 = 21.4 \text{ cm}$$

6. (a) Radius =  $\frac{D}{2} = \frac{14}{2} = 7 \text{ cm}$

(b) Radius =  $\frac{D}{2} = \frac{18}{2} = 9 \text{ cm}$

(c) Radius =  $\frac{D}{2} = \frac{16.8}{2} = 8.4 \text{ cm}$

(d) Radius =  $\frac{D}{2} = \frac{18.14}{2} = 9.07 \text{ cm}$

(e) Radius =  $\frac{D}{2} = \frac{22.18}{2} = 11.09 \text{ cm}$

7. (a) Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 14 = 88 \text{ cm}$$

(b) Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 14 = 88 \text{ cm}$$

(c) Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 21 = 132 \text{ cm}$$

(d) Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{21.07}{50}$$

$$= \frac{11 \times 301}{25} = 112.44 \text{ cm}$$

(e) Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 0.63 = 44 \times 0.9$$

$$= 39.6 \text{ cm}$$

8. (a) Radius =  $\frac{D}{2} = \frac{28}{2} = 14 \text{ cm}$

Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 14 = 88 \text{ cm}$$

(b) Radius =  $\frac{D}{2} = \frac{21}{2} \text{ cm}$

Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{21}{2} = 66 \text{ cm}$$

(c) Radius =  $\frac{D}{2} = \frac{28.14}{2} = 14.07 \text{ cm}$

Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times 14.07$$

$$= 2 \times 22 \times 2.01 = 88.44 \text{ cm}$$

(d) Radius =  $\frac{D}{2} = \frac{7}{2} = \frac{3.5}{2} \text{ cm}$

Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{3.5}{2} = 11 \text{ cm}$$

(e) Radius =  $\frac{D}{2} = \frac{21.07}{2} \text{ cm}$

Circumference of circle =  $2\pi r$

$$= 2 \times \frac{22}{7} \times \frac{21.07}{2} = 66.22 \text{ cm}$$

9. Radius of circle = 21 cm

Circumference of circle when

$$\pi = \frac{22}{7} = 2\pi r = 2 \times \frac{22}{7} \times 21$$

$$= 132 \text{ cm}$$

Circumference of circle when

$$\pi = 3.14 = 2\pi r$$

$$= 2 \times \frac{3.14}{100} \times 21 = \frac{13.188}{100}$$

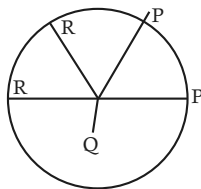
There are no difference b/w any two

10. Fill in the blanks:

(a) Half (b) Radius (c) Double

(d) Diameter (e) Arc

11.



## Chapter-10

### Exercise - 10.1

1. (a)  $AC + AB + BC$   
 $= (5 + 4 + 6) \text{ cm} = 15 \text{ cm}$   
(b)  $CD + DF + FE + EC$   
 $= (3 + 6 + 3 + 6) \text{ cm} = 18 \text{ cm}$   
(c)  $JK + KH + HI + IJ$   
 $= (5 + 5 + 5 + 5) \text{ cm} = 20 \text{ cm}$   
(d)  $DC + CM + MN + ND$   
 $= (3 + 7 + 5 + 8) \text{ cm} = 23 \text{ cm}$   
(e)  $PQ + QR + RS + ST + TU$   
 $= (2 + 2 + 2 + 2 + 2) \text{ cm} = 10 \text{ cm}$   
(f)  $VW + WX + XY + YZ$   
 $= (6 + 5 + 4 + 4 + 5) \text{ cm} = 24 \text{ cm}$
2. (a)  $(5.3 + 6.7 + 10.8) \text{ cm}$   
 $= 22.8 \text{ cm}$   
(b)  $(8.6 + 11.6 + 12.5) \text{ cm}$   
 $= 32.7 \text{ cm}$   
(c)  $(9.5 + 7.6 + 16.5) \text{ cm}$   
 $= 33.6 \text{ cm}$   
(d)  $(7.6 + 8.5 + 17.3) \text{ cm}$   
 $= 33.4 \text{ cm}$
3. (a) Perimeter of rectangle  
 $= 2(l + b) = 2(11 + 6)$   
 $= 2 \times 7 = 34 \text{ cm}$   
(b) Perimeter of rectangle  
 $= 2(l + b) = 2(7.3 + 5.5)$   
 $= 2 \times 12.8 = 25.6 \text{ cm}$   
(c) Perimeter of rectangle  
 $= 2(l + b) = 2(17.6 + 7.5)$   
 $= 50.2 \text{ cm}$   
(d) Perimeter of rectangle  
 $= 2(l + b) = 2(160 + 86)$   
 $= 492 \text{ cm}$
4. (a) Perimeter of square  $= 4 \times \text{side}$   
 $= 4 \times 5 = 20 \text{ cm}$   
(b) Perimeter of square  $= 4 \times \text{side}$   
 $= 4 \times 9.3 = 37.2 \text{ cm}$   
(c) Perimeter of square  $= 4 \times \text{side}$   
 $= 4 \times 8.6 = 34.4 \text{ cm}$   
(d) Perimeter of square  $= 4 \times \text{side}$   
 $= 4 \times 13.5 = 54.4 \text{ cm}$
5. Two equal sides of isosceles  $= 7 \text{ cm}$   
And third side  $= 6.8 \text{ cm}$   
 $(7 + 7 + 6.8) \text{ cm} = 20.8 \text{ cm}$
6. Sides of equilateral triangle  $= 13.5 \text{ cm}$   
Perimeter of equilateral triangle  
 $= (13.5 + 13.5 + 13.5)$   
 $= 40.5 \text{ cm}$
7. Perimeter of an equilateral triangle  $= 22.5 \text{ cm}$   
Length of one side  $= 8.7 \text{ cm}$   
Length of other side  $= 9.5 \text{ cm}$   
Let, length of third side be  $x$   
Perimeter of an equilateral triangle  $= \text{Sum of all side}$   
 $22.5 = 8.7 + 9.5 + x$   
 $22.5 = 18.2 + x$   
 $x = 22.5 - 18.2 \quad x = 4.3 \text{ cm}$   
So, the third side is  $4.3 \text{ cm}$
8. Let the length of each side of equilateral triangle be  $x$   
Perimeter of equilateral triangle  $= 63 \text{ cm}$   
 $x + x + x = 63 \text{ cm}$   
 $3x = 63 \quad x = \frac{63}{3} = 21 \text{ cm}$   
So, the all sides of equilateral triangle is  $21 \text{ cm}$
9. Perimeter of a rectangular field  $= 600 \text{ m}$   
Length of the field  $= 160 \text{ m}$   
Let, breadth of the field be  $x$   
Perimeter of rectangular field  
 $2(l+b)$   
 $600 \text{ m} = 2(160 + x)$

$$600 \text{ m} = 320 + 2x$$

$$600 \text{ m} - 320 = 2x$$

$$280 = 2x$$

$$x = \frac{280}{2} \quad x = 140 \text{ cm}$$

10. Perimeter of square field = 2000m

Let the sides of square field be  $x$

Perimeter of square field

$$= 4 \times \text{side}$$

$$2000 = 4 \times x$$

$$= \frac{2000}{4} = x \quad x = 500$$

So, the all sides of square field is 500 cm

11. Length of a field = 160 m

Breadth of a field = 90 m

Perimeter of field =  $2(l + b)$

$$= 2(160 + 90) = 2(250)$$

$$= 2 \times 250 = 500 \text{ cm}^2$$

Rate of  $1 \text{ m}^2 = ₹ 2.50$

Rate of  $500 \text{ m}^2 = ₹ 1250$

12. Sides of square field = 500 m

Perimeter of square =  $4 \times \text{side}$

$$= 4 \times 500 = 20,00 \text{ m}^2$$

13. Perimeter of rectangle field

$$= 700 \text{ m}$$

Breadth of field be  $x$

Perimeter of rectangle field

$$2[l + b]$$

$$700 = 2[250 + x]$$

$$700 = 500 + 2x$$

$$700 - 500 = 2x$$

$$= 200 = 2x \quad x = \frac{200}{2} \quad x = 100$$

So, the length of field = 100 cm

14. (a) Perimeter of rectangle

$$2[l + b] = 2[84 + 42]$$

$$= 2[126] = 252 \text{ cm}$$

- (b) Perimeter of square =  $4 \times \text{side}$

$$= 4 \times 80 = 320 \text{ cm}$$

- (c) Perimeter of equilateral triangle

$$= a + b + c$$

$$= 300 + 300 + 300 = 900 \text{ cm}$$

So, equilateral triangle has more perimeter

15. Length of rectangle = 200 m

Breadth of rectangle = 100 m

Area of rectangle = area of square

$$2[l + b] = 4 \times \text{side}$$

$$2[200 + 100] = 4 \times \text{side}$$

$$= \frac{2 \times 300}{4} = \text{side}$$

So, the side of square = 150 m

### Exercise 10.2

1. (a) Length = 26 cm

Breadth = 8.6 cm

Area of rectangle =  $l \times b$

$$= 26 \times 8.6 = 223.6 \text{ cm}^2$$

- (b) Length = 60.25 m

Breadth = 13.5 m

Area of rectangle =  $l \times b$

$$= 60.25 \times 13.5 = 813.375 \text{ cm}^2$$

- (c) Length of rectangle = 20.5 m

Breadth of rectangle = 8.62 m

Area of rectangle =  $l \times b$

$$= 20.5 \times 8.62 = 176.71 \text{ m}^2$$

- (d) Length of rectangle = 235.05 cm

Breadth of rectangle = 32.78 cm

Area of rectangle =  $l \times b$

$$= 235.05 \times 32.78$$

$$= 7,719.69 \text{ cm}^2$$

2. (a) Length =  $\frac{\text{Area}}{\text{Breadth}}$

$$= \frac{153 \text{ m}^2}{9 \text{ m}} = 17 \text{ m}$$

- (b) Length =  $\frac{\text{Area}}{\text{Breadth}}$

$$= \frac{1650 \text{ m}^2}{25 \text{ m}} = 66 \text{ m}$$

- (c) Length =  $\frac{\text{Area}}{\text{Breadth}}$

- $$= \frac{918 \text{ m}^2}{18 \text{ m}} = 51 \text{ m}$$
- (d) Length =  $\frac{\text{Area}}{\text{Breadth}}$   

$$= \frac{1050 \text{ m}^2}{50 \text{ m}} = 210 \text{ m}$$
3. (a) Breadth =  $\frac{\text{Area}}{\text{Length}}$   

$$= \frac{10050}{50} = 210 \text{ m}$$
- (b) Breadth =  $\frac{\text{Area}}{\text{Length}}$   

$$= \frac{40020}{20} = 2,001 \text{ m}$$
- (c) Breadth =  $\frac{\text{Area}}{\text{Length}}$   

$$= \frac{35.75}{5.5} = 6.5 \text{ m}$$
- (d) Breadth =  $\frac{\text{Area}}{\text{Length}}$   

$$= \frac{650}{25} = 26 \text{ m}$$
4. (a) Area of square = side  $\times$  side  

$$= (16 \times 16) \text{ m}^2 = 256 \text{ m}^2$$
- (b) Area of square = side  $\times$  side  

$$= (25 \times 25) \text{ m}^2 = 625 \text{ m}^2$$
- (c) Area of square = side  $\times$  side  

$$= (13.6 \times 13.6) \text{ m}^2 = 184.96 \text{ m}^2$$
- (d) Area of square = side  $\times$  side  

$$= (52.70 \times 52.70) \text{ m}^2 = 2777.29 \text{ m}^2$$
5. Length of field = 238.65 m  
 Breadth of field = 135.25 m  
 Area of rectangular field =  $l \times b$   

$$= (238.65 \times 135.25) \text{ m}^2 = 32,277.4125 \text{ m}^2$$
6. Perimeter of rectangle = 200 m  
 Length = 75 m  
 Breadth of rectangle =  $x$   
 Perimeter of rectangle =  $2 [l+b]$   

$$200 = 2 [75+x]$$
  

$$200 = 150 + 2x$$
  

$$200 - 150 = 2x$$

$50 = 2x \quad x = 25$   
 So, the breadth of rectangle = 25 cm

$$\begin{aligned} \text{Area of rectangle} &= l \times b \\ &= 25 \times 75 \\ &= 1775 \text{ cm}^2 \end{aligned}$$

7. Area of square = side  $\times$  side  

$$= (79 \times 79) \text{ m}^2 = 6241 \text{ m}^2$$
8. (a) Area of (a) =  $l \times b$   

$$= (11.4 \times 9.25) \text{ m}^2 = 105.450 \text{ m}^2$$
- (b) Area of (b) =  $l \times b$   

$$= (8.82 \times 8.45) \text{ m}^2 = (74.5290) \text{ m}^2$$
  
 So, 'a' has a greater area
9. Length of floor = 50 cm  
 Breadth of floor = 32 cm  
 Area of floor =  $l \times b$   

$$= (50 \times 32) \text{ cm}^2 = 1600 \text{ cm}^2$$
  
 Area of 62 slabs =  $62 \times 1600 = 992 \text{ cm}^2$
10. Length of rectangular room = 35 m  
 Breadth of rectangular room = 24 m  
 Area of rectangular room =  $l \times b$   

$$= (35 \times 24) \text{ m}^2 = 840 \text{ m}^2$$
  
 Cost of carpeting of  $1 \text{ m}^2 = 30 \text{ Rs}$   
 Cost of carpeting of  $840 \text{ m}^2 = 840 \times 30 = ₹ 25200$
11. Side of square = 60.25 m  
 Area of square = side  $\times$  side  

$$= 60.25 \times 60.25 = (3,630.0625) \text{ m}^2$$
  
 Cost of  $1 \text{ m}^2 = ₹ 6$   
 Cost of  $3,630.0625 = 3,630.0625 \times 6 = ₹ 21,780.375$
12. Area of side of length = 7.9 m  

$$= \text{side} \times \text{side} = 7.9 \times 7.9 = 62.41 \text{ m}^2$$
  
 Area of side of length = 790 cm  

$$= \text{side} \times \text{side} = 790 \times 790 = 624100 \text{ cm}^2$$
  
 Both are same area

### Exercise 10.3

1. (a) Volume of cuboids =  $l \times b \times h$   
 $= (15 \times 17 \times 20) \text{ cm}^3$   
 $= 5100 \text{ cm}^3$

(b) Volume of cuboids =  $l \times b \times h$   
 $= (19.25 \times 16.25 \times 19)$   
 $= \frac{1925}{100} \times \frac{1625}{100} \times 19$   
 $= \frac{100}{73 \times 65 \times 19}$   
 $= \frac{19 \times 19}{90155} = 249.736842$

(c) Volume of cuboids =  $l \times b \times h$   
 $= (11.5 \times 11.3 \times 21) \text{ cm}^3$   
 $= 2728.95 \text{ cm}^3$

(d) Volume of cuboids =  $l \times b \times h$   
 $= \frac{5}{9} \times \frac{2}{15} \times \frac{3}{5} = \frac{2}{45} \text{ cm}^3$

(e) Volume of cuboids =  $l \times b \times h$   
 $= \left(2\frac{3}{8} \times 2\frac{19}{8} \times 1\frac{2}{5}\right) \text{ cm}^3$   
 $= \frac{19}{8} \times \frac{19}{8} \times \frac{7}{5} \text{ cm}^3 = \frac{6859}{320} \text{ cm}^3$

2. (a) Volume of cubes =  $(\text{side})^3$   
 $= (22.2)^3 = 10,941.048 \text{ cm}^3$

(b) Volume of cubes =  $(\text{side})^3$   
 $= (38.25)^3 = 55,962.1406 \text{ cm}^3$

(c) Volume of cubes =  $(\text{side})^3$   
 $= \left(5\frac{6}{8}\right)^3 = \left(\frac{46}{8}\right)^3$

(d) Volume of cubes =  $(\text{side})^3$   
 $= \left(4\frac{1}{2}\right)^3 = \left(\frac{9}{2}\right)^3 = \frac{729}{8}$

(e) Volume of cubes =  $(\text{side})^3$   
 $= \left(20\frac{5}{8}\right)^3 = \left(\frac{165}{8}\right)^3$   
 $= \frac{4492125}{512} \text{ cm}^3$

3. Volume of earth dug =  $l \times b \times h$   
 $= (13 \times 2.5 \times 6.5) \text{ m}^3$   
 $= 211.25 \text{ m}^3$

4. Length of a room = 15 m  
 Breadth of a room = 6 m  
 Height of a room = 6.2

Volume of room =  $l \times b \times h$   
 $= (15 \times 6 \times 6.2) \text{ m}^3 = 558 \text{ m}^3$

5. Edge of cubical box = 16 cm  
 Volume of cuboid =  $l \times b \times h$   
 $= (16 \times 16 \times 16) \text{ cm}^3 = 4096 \text{ cm}^3$

Edge of cube = 4 cm  
 Volume of cube =  $(\text{side})^3$   
 $= 4 \times 4 \times 4$

Number of small cubes  
 $= \frac{\text{Volume of cuboid}}{\text{Volume of cube}}$   
 $= \frac{(16 \times 16 \times 16) \text{ cm}^3}{(4 \times 4 \times 4) \text{ cm}^3}$   
 $= 4 \times 4 \times 4 = 64 \text{ cubes}$

6. Edge of cube = 5 cm  
 Length of resultant cube = 15 cm  
 Breadth of resultant cube = 5 cm  
 Height of resultant cube = 5 cm  
 So, the volume of resultant cube  
 $= (15 \times 15 \times 15) \text{ cm}^3 = 375 \text{ cm}^3$

7. (a) Volume =  $l \times b \times h$   
 $= 500 \times 300 \times 2$   
 $= 30,000 \text{ cm}^3$

(b) Volume =  $l \times b \times h$   
 $= (11 \times 12 \times 13) \text{ cm}^3$

(c) Height  
 $= \frac{\text{Volume}}{l \times b} = \frac{240}{10 \times 6} = 4 \text{ m}^3$

(d) Height =  $\frac{\text{Volume}}{l \times b}$   
 $= \frac{45}{48} = \frac{45}{48} = \frac{1}{2} \text{ m}$   
 $= \frac{5}{2} \times \frac{3}{4} = \frac{15}{8}$

(e) Volume =  $l \times b \times h$   
 $= (2.5 \times 6.7 \times 9.8) \text{ cm}^3$   
 $= 164.15 \text{ cm}^3$

8. (a) Volume of cuboid =  $l \times b \times h$   
 $= (16 \times 2.8 \times 15) = 672 \text{ m}^3$

(b) Volume of square =  $(\text{side})^3$   
 $= (14)^3$   
 $= 14 \times 14 \times 14 = 2744 \text{ m}^3$   
 Cube has larger area.

## Chapter-11

### Exercise - 11.1

#### 1. Correct each of the following into metres:

1 kilometer = 1000 metre

(a) 9 km ( $9 \times 1000$ ) m = 9000 m

(b) 12 km ( $12 \times 1000$ ) m = 12000 m

(c) 25 km ( $25 \times 1000$ ) m = 25000 m

(d) 30 km ( $30 \times 1000$ ) m = 3000 m

(e) 8 km 635 m ( $8 \text{ km } 635 \times 1000$ ) m = 8635 m

(f) 22 km 35 m ( $22 \text{ km } 35 \text{ m} \times 1000$ ) = 22035 m

(g) 29 km 834 m ( $29 \text{ km } 834 \text{ m} \times 1000$ ) = 22035 m

(h) 2 km 5 m ( $2 \text{ km } 5 \text{ m} \times 1000$ ) = 2005 m

#### 2. Convert each of the following in to centimetres one meter = 1000 centimeter:

One meter = 100 centimeter

(a) 8 m ( $8 \times 100$ ) = 100 cm.

(b) 9 m ( $9 \times 100$ ) m = 900 cm.

(c) 11 m ( $11 \times 100$ ) m = 1100 cm

(d) 16 m ( $16 \times 100$ ) m = 1600 m

(e) 3 m 60 cm ( $3 \text{ m } 60 \text{ cm} \times 100$ ) m = 360 cm

(f) 9 m 85 cm ( $9 \text{ m } 85 \text{ cm} \times 100$ ) m = 985 cm

(g) 13 m 15 cm ( $13 \text{ m } 15 \text{ cm} \times 100$ ) m = 1315 cm

(h) 17m 35cm ( $17 \text{ m } 35 \text{ cm} \times 100$ ) m = 1735 cm

#### 3. Correct in to kilometres and metres.

(a) 6000 m = ( $6000 \div 1000$ ) km = 6 km

(b) 8000m = ( $8000 \div 1000$ ) km = 8 km.

(c) 20000m = ( $2000 \div 1000$ ) km = 20km

(d) 8000m = ( $8000 \div 1000$ ) km = 8km

(e) 835m = ( $835 \div 1000$ ) km = 0 km 835 m.

(f) 7395 m = ( $7395 \div 1000$ ) km = 7km 395m

(g) 2005m = ( $2005 \div 1000$ ) km = 2km 5m

(h) 8888 m = ( $8888 \div 1000$ ) km = 8km 888m.

#### 4. Convert into m and cm.

(a) 800 cm = ( $800 \div 100$ ) = 8 m

(b) 600 cm = ( $600 \div 100$ ) = 6 m

(c) 2000 cm = ( $2000 \div 100$ ) = 20 m

(d) 1300 cm = ( $1300 \div 100$ ) = 13 m

(e) 760 cm = ( $760 \div 100$ ) = 7 m 60 cm

(f) 835 cm = ( $835 \div 100$ ) = 5 m 35 cm

(g) 905 cm = ( $905 \div 100$ ) = 9 m 5 cm

(h) 1950 cm = ( $1950 \div 100$ ) = 19 m 55 cm

### Exercise-11.2

#### 1. Add the following:

|     |             |            |     |             |            |
|-----|-------------|------------|-----|-------------|------------|
| (a) | km          | m          | (b) | km          | m          |
|     | 20          | 236        |     | 36          | 060        |
|     | 16          | 326        |     | 38          | 290        |
|     | <u>+ 35</u> | <u>656</u> |     | <u>+ 56</u> | <u>730</u> |
|     | 72          | 218        |     | 131         | 80         |

|     |              |            |
|-----|--------------|------------|
| (c) | km           | m          |
|     | 226          | 200        |
|     | 26           | 336        |
|     | <u>+ 336</u> | <u>486</u> |
|     | 589          | 22         |

**2. Add the following:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 30 \quad 26 \\ 50 \quad 36 \\ + 56 \quad 39 \\ \hline 137 \quad 01 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 73 \quad 66 \\ 79 \quad 56 \\ + 28 \quad 07 \\ \hline 181 \quad 29 \end{array}
 \end{array}$$

**3. Subtract the following:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 226 \quad 936 \\ - 86 \quad 826 \\ \hline 72 \quad 218 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 636 \quad 362 \\ - 259 \quad 460 \\ \hline 376 \quad 902 \end{array}
 \end{array}$$

**4. Subtract the following:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 56 \quad 60 \\ - 33 \quad 59 \\ \hline 23 \quad 01 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 636 \quad 36 \\ - 259 \quad 46 \\ \hline 376 \quad 90 \end{array}
 \end{array}$$

**5. Arrange in columns and add:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 66 \quad 560 \\ 259 \quad 46 \\ + 6 \quad 06 \\ \hline 331 \quad 612 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 666 \quad 66 \\ 555 \quad 5 \\ + 444 \quad 4 \\ \hline 1665 \quad 75 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(e)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 800 \quad 45 \\ + 48 \quad 999 \\ \hline 44 \end{array}
 \end{array}$$

**6. Arrange in column and subtract:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 63 \quad 650 \\ - 39 \quad 360 \\ \hline 24 \quad 290 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 77 \quad 7 \\ - 66 \quad 6 \\ \hline 11 \quad 1 \end{array}
 \end{array}$$

**7. Find the difference:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 96 \quad 225 \\ - 95 \quad 335 \\ \hline 0 \quad 890 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{m} \quad \text{cm} \\ 291 \quad 77 \\ - 280 \quad 40 \\ \hline 11 \quad 37 \end{array}
 \end{array}$$

**Exercise - 11.3****1. Multiply the following:**

$$\begin{array}{r}
 \text{(a)} \quad \begin{array}{r} \text{km} \quad \text{m} \\ 250 \quad 335 \\ \times 6 \\ \hline 1502 \quad 10 \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{kmm} \\ 55060 \\ \times 8 \\ \hline 4408480 \end{array}
 \end{array}$$

(f)  $\begin{array}{r} \text{m cm} \\ 835\ 50 \\ \times 8 \\ \hline 5524\ 00 \end{array}$

$$\begin{array}{r} \text{(g)} \quad \text{m cm} \\ 35 \ 52 \\ \times 9 \\ \hline 319 \ 68 \end{array}$$

(h)  $\begin{array}{r} \text{m cm} \\ 245 \ 6 \\ \times 8 \\ \hline 1960 \ 48 \end{array}$

[illegible]

(b)

|   | km        | m        |     |
|---|-----------|----------|-----|
| 3 | 201       | 366      | 67  |
|   | 18        |          |     |
|   | <u>21</u> | ↓ ↓ ↓    |     |
|   | 21        | ↓ ↓ ↓    |     |
|   | <u>0</u>  | 3        | 122 |
|   |           | <u>3</u> |     |
|   |           | 6        |     |
|   |           | <u>6</u> |     |
|   |           | 6        |     |
|   |           | <u>6</u> |     |
|   |           | x        |     |

(c)

| km | m   |     |
|----|-----|-----|
| 4  | 552 | 138 |
|    | 4   |     |
|    | 15  |     |
|    | 12  |     |
|    | 32  |     |
|    | 32  |     |
|    | x   |     |
|    |     | 4   |
|    |     | 224 |
|    |     | 20  |
|    |     | 24  |
|    |     | 24  |
|    |     | x   |

$$\begin{array}{r} \text{km} \quad \text{m} \\ (d) \quad 5 \overline{) 955} \quad 100 \overline{) 191} \\ \underline{5} \quad \quad \quad \underline{10} \quad \quad \quad \underline{10} \\ 45 \quad \quad \quad 91 \quad \quad \quad 1 \\ \underline{45} \quad \quad \quad \underline{90} \quad \quad \quad \underline{10} \\ 5 \quad \quad \quad 1 \quad \quad \quad 0 \\ \underline{5} \quad \quad \quad \underline{10} \quad \quad \quad \underline{0} \\ \times \quad \quad \quad \times \quad \quad \quad \times \end{array}$$

(e)

| km | m         |    |
|----|-----------|----|
| 6  | 294       | 60 |
|    | 24        |    |
|    | <u>54</u> |    |
|    | 54        |    |
|    | <u>0</u>  |    |

|   |          |    |
|---|----------|----|
| 6 | 60       | 10 |
|   | 6        |    |
|   | <u>0</u> |    |
|   | 0        |    |
|   | <u>0</u> |    |

- |                        | km         | m          |
|------------------------|------------|------------|
| 1. Travels first day = | 63         | 760        |
| Travels second day =   | 93         | 560        |
| Travels third day =    | 22         | 000        |
| Distance covered =     | <u>337</u> | <u>220</u> |

2. Length of rectangle  
= 110 m 20 cm

Breadth of rectangle

$$= 90 \text{ m } 80 \text{ cm}$$
$$\text{Perimeter of rectangle} = 2 [l+b]$$
$$= 2 [110 \text{ m } 20 \text{ cm} + 90 \text{ m } 80 \text{ cm}]$$
$$= 2 [210 \text{ m}] = 402 \text{ m}^2$$

|   |              |            |
|---|--------------|------------|
|   | m            | cm         |
|   | 1 1 0        | 2 0        |
| – | 9 0          | 8 0        |
|   | <u>2 0 1</u> | <u>0 0</u> |

- |                       | m           | cm        |
|-----------------------|-------------|-----------|
| 3. The length of wire | = 83        | 90        |
| Given to a customer   | = 67        | 40        |
| Left the wire         | = <u>16</u> | <u>50</u> |

4. The length of cloth m cm  
 Sold to Ramesh = 37 . 46  
 Sold to Naresh = 29 . 36  
 Sold to Vishesh = 56 . 50  
 Total sold  $\underline{120 . 32}$

Total length of cloth m cm  
 235 . 60

Total sold = 123 . 32

The cloth left now =  $\underline{112 . 28}$

5. Cloth required for lower = 2 8  
 =  $\times 8$

Required for 8 lower =  $\underline{1840}$

6. A car travels in the day =  
 It will cover 7 days =

$$\begin{array}{r} \text{km} \quad \text{m} \\ 220 \quad 600 \\ \times 7 \\ \hline 1544 \quad 200 \end{array}$$

7. The length is water pump  
 m cm  
 = 260 . 50

Two pieces equal length =  $\frac{1}{2}$

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 2 \overline{) 260 \quad 50} \quad 130 \\ \underline{2} \quad \quad \quad \downarrow \\ 6 \quad \quad \quad \downarrow \\ \underline{6} \quad \quad \quad \downarrow \\ 0 \quad 2 \overline{) 50} \quad 25 \\ \underline{0} \quad \quad \quad \downarrow \\ 0 \quad \quad \quad \downarrow \\ \underline{00} \quad \underline{00} \quad 130 \text{ m } 25 \text{ cm} \end{array}$$

8. The length of thread 880 m 88 cm  
 Divided 8 pieces

$$\begin{array}{r} \text{m} \quad \text{cm} \\ 8 \overline{) 880 \quad 88} \quad 110 \\ \underline{8} \quad \quad \quad \downarrow \\ 8 \quad \quad \quad \downarrow \\ \underline{8} \quad \quad \quad \downarrow \\ 0 \quad 8 \overline{) 88} \quad 11 \\ \underline{0} \quad \quad \quad \downarrow \\ 0 \quad \quad \quad \downarrow \\ \underline{0} \quad \underline{8} \\ \times \end{array}$$

One pieces = 110 m 11 cm

### Exercise - 11.5

#### 1. Convert in to grams:

- (a) 1 kg = 1000 grams  
 3 kg = (3  $\times$  1000) kg  
 = 3000 g  
 (b) 7 kg = (7  $\times$  1000) kg = 7000 g  
 (c) 10 kg = (10  $\times$  1000) kg  
 = 10000 g  
 (d) 8 kg = (8  $\times$  1000) kg = 8000 g  
 (e) 2 kg 635 g = (2 kg 635  $\times$  1000)  
 kg = 2635 g  
 (f) 22 kg 60 g = (22 kg 60  $\times$  1000)  
 kg = 22060 g  
 (g) 5 kg 5 g = (5 kg 5  $\times$  1000) kg  
 = 5005 g  
 (h) 10 kg 100 g = (10 kg 100  $\times$   
 1000) kg = 10100 g

#### 2. Convert in to kg and g:

- 1 kg = 100 grams  
 (a) 6000 g = (6000  $\div$  1000) = 6 kg  
 (b) 9000 g = (9000  $\div$  1000) = 9 kg  
 (c) 8000 g = (8000  $\div$  1000) = 8 kg  
 (d) 12000 g = (12000  $\div$  1000)  
 = 12 kg  
 (e) 4380 g = (4380  $\div$  1000)  
 = 4 kg 380 g  
 (f) 7185 g = (7185  $\div$  1000)  
 = 7 kg 185 g  
 (g) 8005 g = (8005  $\div$  1000)  
 = 8 kg 5 g  
 (h) 23405 g = (23405  $\div$  1000)  
 = 23 kg 405 g

### Exercise - 11.6

#### 1. Add the following:

- (a) kg g (b) kg g  
 259 732 63 339  
 043 065 56 236  
 + 028 236 + 05 860  
 $\underline{331 \quad 033} \quad \underline{125 \quad 435}$

$$\begin{array}{r}
 \text{(c) kg} \quad \text{g} \\
 436 \ 006 \\
 086 \ 563 \\
 + 28 \ 683 \\
 \hline
 551 \ 252
 \end{array}$$

**2. Subtract the following:**

$$\begin{array}{r}
 \text{(a) kg} \quad \text{g} \quad \text{(b) kg} \quad \text{g} \\
 226 \ 936 \quad 233 \ . \ 05 \\
 - 96 \ 826 \quad - 89 \ . \ 75 \\
 \hline
 130 \ 110 \quad 143 \ 30
 \end{array}$$

$$\begin{array}{r}
 \text{(c) kg} \quad \text{g} \\
 636 \ 36 \\
 - 259 \ 46 \\
 \hline
 376 \ 90
 \end{array}$$

**3. Arrange in column and subtract:**

$$\begin{array}{r}
 \text{(a) kg} \quad \text{g} \quad \text{(b) kg} \quad \text{g} \\
 063 \ 076 \quad 246 \ 235 \\
 223 \ 335 \quad 370 \ 49 \\
 + 83 \ 234 \quad + 235 \ 00 \\
 \hline
 369 \ 645 \quad 369 \ 284
 \end{array}$$

$$\begin{array}{r}
 \text{(c) kg} \quad \text{g} \quad \text{(d) kg} \quad \text{g} \\
 260 \ 0 \quad 839 \ 36 \\
 256 \ 256 \quad 862 \ 30 \\
 + 436 \ 046 \quad + 005 \ 60 \\
 \hline
 952 \ 302 \quad 170 \ 726
 \end{array}$$

**4. Arrange in column and subtract:**

$$\begin{array}{r}
 \text{(a) kg} \quad \text{g} \quad \text{(b) kg} \quad \text{g} \\
 89 \ 560 \quad 260 \ 09 \\
 - 63 \ 450 \quad - 243 \ 07 \\
 \hline
 26 \ 100 \quad 017 \ 02
 \end{array}$$

$$\begin{array}{r}
 \text{(c) kg} \quad \text{g} \quad \text{(d) kg} \quad \text{g} \\
 320 \ 730 \quad 360 \ 600 \\
 - 290 \ 60 \quad - 336 \ 000 \\
 \hline
 030 \ 670 \quad 246 \ 000
 \end{array}$$

**Exercise - 11.7**

**1. Multiply the following:**

$$\begin{array}{r}
 \text{(a) kg} \quad \text{g} \quad \text{(b) kg} \quad \text{g} \\
 67 \ 283 \quad 283 \ 75 \\
 \times 8 \quad \times 9 \\
 \hline
 538 \ 264 \quad 2547625
 \end{array}$$

$$\begin{array}{r}
 \text{(c) kg} \quad \text{g} \quad \text{(d) kg} \quad \text{g} \\
 293 \ 8 \quad 436 \ 60 \\
 \times 5 \quad \times 7 \\
 \hline
 1465 \ 40 \quad 3046 \ 20
 \end{array}$$

$$\begin{array}{r}
 \text{(e) kg} \quad \text{g} \quad \text{(f) kg} \quad \text{g} \\
 560 \ 650 \quad 73 \ 84 \\
 \times 6 \quad \times 4 \\
 \hline
 3363360 \quad 292 \ 344
 \end{array}$$

**2. Divided the following:**

$$\begin{array}{r}
 \text{(a) } \begin{array}{c} \text{kg} \quad \text{g} \\ 9 \overline{) 738 \ 99} \end{array} \begin{array}{c} 82 \\ 11 \end{array} \\
 \begin{array}{c} 72 \\ \hline 18 \\ 18 \\ \hline 0 \end{array} \begin{array}{c} 99 \\ \downarrow \downarrow \downarrow \\ 99 \\ \hline 9 \\ 9 \\ \hline 00 \end{array}
 \end{array}$$

82 kg 11g

$$\begin{array}{r}
 \text{(b) } \begin{array}{c} \text{kg} \quad \text{g} \\ 8 \overline{) 664 \ 240} \end{array} \begin{array}{c} 83 \\ 30 \end{array} \\
 \begin{array}{c} 64 \\ \hline 24 \\ 24 \\ \hline 0 \end{array} \begin{array}{c} 240 \\ \downarrow \downarrow \downarrow \\ 240 \\ \hline 0 \\ 0 \\ \hline \times \end{array}
 \end{array}$$

83 kg 30g

$$\begin{array}{r}
 \text{(c) } \begin{array}{c} \text{kg} \quad \text{g} \\ 7 \overline{) 511 \ 84} \end{array} \begin{array}{c} 73 \\ 12 \end{array} \\
 \begin{array}{c} 49 \\ \hline 21 \\ 21 \\ \hline 0 \end{array} \begin{array}{c} 84 \\ \downarrow \downarrow \downarrow \\ 84 \\ \hline 7 \\ 14 \\ 14 \\ \hline \times \end{array}
 \end{array}$$

72 kg 12g

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 \text{(d)} \quad 6 \overline{) 564} \quad 6 \overline{) 12} \quad 94 \\
 \underline{54} \quad \downarrow \downarrow \downarrow \\
 24 \quad \downarrow \downarrow \downarrow \\
 \underline{24} \quad 6 \overline{) 12} \quad 102 \\
 \underline{00} \quad \downarrow \downarrow \downarrow \\
 \quad \quad 6 \quad \downarrow \downarrow \downarrow \\
 \quad \quad \underline{12} \\
 \quad \quad 12 \\
 \quad \quad \underline{\times} \\
 94 \text{ kg } 102 \text{ g}
 \end{array}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 \text{(e)} \quad 5 \overline{) 655} \quad 131 \\
 \underline{5} \quad \downarrow \downarrow \downarrow \\
 15 \quad \downarrow \downarrow \downarrow \\
 \underline{15} \quad \downarrow \downarrow \downarrow \\
 \quad \quad 5 \quad \downarrow \downarrow \downarrow \\
 \quad \quad \underline{5} \\
 \quad \quad 0 \quad 131 \text{ kg}
 \end{array}$$

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 \text{(f)} \quad 5 \overline{) 1130} \quad 660 \quad 226 \\
 \underline{10} \quad \downarrow \downarrow \downarrow \\
 13 \quad \downarrow \downarrow \downarrow \\
 \underline{10} \quad \downarrow \downarrow \downarrow \\
 30 \quad 5 \overline{) 660} \quad 132 \\
 \underline{30} \quad \downarrow \downarrow \downarrow \\
 \underline{00} \quad \downarrow \downarrow \downarrow \\
 \quad \quad 5 \quad \downarrow \downarrow \downarrow \\
 \quad \quad \underline{16} \\
 \quad \quad 15 \\
 \quad \quad \underline{10} \\
 266 \text{ kg } 132 \text{ g} \quad \underline{\times}
 \end{array}$$

### Exercise - 11.8

- |           | kg        | g          |
|-----------|-----------|------------|
| Mango     | 4         | 140        |
| Apple     | 2         | 040        |
| Vegetable | + 9       | 450        |
|           | <u>15</u> | <u>630</u> |
- |                               | kg        | g          |
|-------------------------------|-----------|------------|
| I <sup>st</sup> dream weight  | = 33      | 580        |
| II <sup>st</sup> dream weight | = 4       | 300        |
|                               | <u>37</u> | <u>880</u> |

- Grapes and straw berries weight

Grapes is

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 9 \quad . \quad 360 \\
 4 \quad . \quad 300 \\
 \hline
 4 \quad . \quad 760 \\
 \text{k g} \quad \text{g} \\
 \text{4. Diksha weight} \quad 37 \quad 500 \\
 \text{Tenuraj} \quad 26 \quad 350 \\
 \text{More Diksha} \quad \underline{11 \quad 150}
 \end{array}$$

- |                       | k g        | g          |
|-----------------------|------------|------------|
| 1 cement + bag weight | 73         | 436        |
|                       |            | $\times 9$ |
| 9 bag weight          | <u>660</u> | <u>924</u> |
- 1 sweets potatoes = 200 g  
8 sweets potatoes =  $\frac{8}{1600}$   
(1600 ÷ 1000) kg = 1 kg 600 g
- 8 bag of rice = 640 kg 16 g

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 8 \overline{) 640} \quad 16 \quad 80 \\
 \underline{64} \quad \downarrow \downarrow \downarrow \\
 0 \quad \downarrow \downarrow \downarrow \\
 0 \quad \downarrow \downarrow \downarrow \\
 \underline{0} \quad 8 \overline{) 16} \quad 2 \\
 \quad \quad \underline{16} \\
 80 \text{ kg } 2 \text{ g} \quad \underline{00}
 \end{array}$$

- Refined oil weight = 336 kg 140 g  
7 persons distribute

$$\begin{array}{r}
 \text{kg} \quad \text{g} \\
 7 \overline{) 336} \quad 140 \quad 48 \\
 \underline{28} \quad \downarrow \downarrow \downarrow \\
 56 \quad \downarrow \downarrow \downarrow \\
 \underline{56} \quad \downarrow \downarrow \downarrow \\
 0 \quad 7 \overline{) 140} \quad 20 \\
 \quad \quad \underline{14} \\
 \quad \quad 0 \\
 \quad \quad \underline{0} \\
 48 \text{ kg } 20 \text{ g} \quad \underline{\times}
 \end{array}$$

### Exercise - 11.9

**1. Convert in to millimeters:**

$$1 \text{ l} = 100 \text{ ml}$$

$$(a) 8 \text{ l} = (8 \times 1000) = 8000 \text{ ml}$$

$$(b) 11 \text{ l} = (11 \times 1000) = 11000 \text{ ml}$$

$$(c) 16 \text{ l} = (16 \times 1000) = 16000 \text{ ml}$$

$$(d) 22 \text{ l} = (22 \times 1000) = 22000 \text{ ml}$$

**2. Convert in to liters and milliliters:**

$$(a) 9000 \text{ ml} = (9000 \div 1000) = 9 \text{ l}$$

$$(b) 8000 \text{ ml} = (8000 \div 1000) = 8 \text{ l}$$

$$(c) 11000 \text{ ml} = (11000 \div 1000)$$

$$= 11 \text{ l}$$

$$(d) 16000 \text{ ml} = (16000 \div 1000)$$

$$= 16 \text{ l}$$

$$(e) 5435 \text{ ml} = (5435 \div 1000)$$

$$= 5 \text{ l } 435 \text{ ml}$$

$$(f) 3210 \text{ ml} = (3210 \div 1000)$$

$$= 3 \text{ l } 210 \text{ ml}$$

$$(g) 7300 \text{ ml} = (7300 \div 1000)$$

$$= 7 \text{ l } 300 \text{ ml}$$

$$(h) 16335 \text{ ml} = (16335 \div 1000)$$

$$= 16 \text{ l } 335 \text{ ml}$$

**Exercise - 11.10****1. Add the following:**

$$(a) \begin{array}{r} 1 \text{ ml} \\ 56 \text{ } 360 \\ 27 \text{ } 436 \\ + 33 \text{ } 426 \\ \hline 117 \text{ } 222 \end{array} \quad (b) \begin{array}{r} 1 \text{ ml} \\ 236 \text{ } 073 \\ 026 \text{ } 339 \\ + 25 \text{ } 006 \\ \hline 287 \text{ } 418 \end{array}$$

$$(c) \begin{array}{r} 1 \text{ ml} \\ 626 \text{ } 562 \\ 336 \text{ } 266 \\ + 26 \text{ } 066 \\ \hline 988 \text{ } 894 \end{array}$$

**2. Subtract the following:**

$$(a) \begin{array}{r} 1 \text{ ml} \\ 56 \text{ } 006 \\ - 32 \text{ } 236 \\ \hline 23 \text{ } 770 \end{array} \quad (b) \begin{array}{r} 1 \text{ ml} \\ 236 \text{ } 736 \\ - 087 \text{ } 427 \\ \hline 149 \text{ } 309 \end{array}$$

(c) Do same as above.

**3. Arrange in column and add:**

$$(a) \begin{array}{r} 1 \text{ ml} \\ 630 \text{ } 560 \\ 026 \text{ } 260 \\ + 30 \text{ } 330 \\ \hline 687 \text{ } 150 \end{array} \quad (b) \begin{array}{r} 1 \text{ ml} \\ 53 \text{ } 426 \\ 90 \text{ } 66 \\ + 28 \text{ } 06 \\ \hline 171 \text{ } 498 \end{array}$$

$$(c) \begin{array}{r} 1 \text{ ml} \\ 223 \text{ } 436 \\ 23 \text{ } 360 \\ + 6 \text{ } 70 \\ \hline 28 \text{ } 66 \end{array} \quad (d) \begin{array}{r} 1 \text{ ml} \\ 360 \text{ } 60 \\ 260 \text{ } 36 \\ + 200 \text{ } 06 \\ \hline 02 \end{array}$$

**4. Arrange in column and find the difference:**

$$(a) \begin{array}{r} 1 \text{ ml} \\ 33 \text{ } 560 \\ - 26 \text{ } 336 \\ \hline 7 \text{ } 224 \end{array} \quad (b) \begin{array}{r} 1 \text{ ml} \\ 360 \text{ } 656 \\ - 333 \text{ } 40 \\ \hline 027 \text{ } 616 \end{array}$$

$$(c) \begin{array}{r} 1 \text{ ml} \\ 293 \text{ } 00 \\ - 83 \text{ } 700 \\ \hline 209 \text{ } 300 \end{array} \quad (d) \begin{array}{r} 1 \text{ ml} \\ 6 \text{ } 00 \\ - 06 \text{ } 00 \\ \hline 54 \text{ } 00 \end{array}$$

**Exercise - 11.11****1. Multiply:**

$$(a) \begin{array}{r} 1 \text{ ml} \\ 64 \text{ } 816 \\ \times 8 \\ \hline 518 \text{ } 528 \end{array} \quad (b) \begin{array}{r} 1 \text{ ml} \\ 89 \text{ } 59 \\ \times 9 \\ \hline 801 \text{ } 531 \end{array}$$

$$(c) \begin{array}{r} 1 \text{ ml} \\ 34 \text{ } 8 \\ \times 7 \\ \hline 23 \text{ } 856 \end{array} \quad (d) \begin{array}{r} 1 \text{ ml} \\ 230 \text{ } 830 \\ \times 6 \\ \hline 1384 \text{ } 980 \end{array}$$

$$(e) \begin{array}{r} 1 \text{ ml} \\ 550 \text{ } 00 \\ \times 5 \\ \hline 2750 \text{ } 00 \end{array} \quad (f) \begin{array}{r} 1 \text{ ml} \\ 26 \text{ } 840 \\ \times 6 \\ \hline 616 \text{ } 040 \end{array}$$

## 2. Divide:

$$\begin{array}{r} \text{(a)} \quad \begin{array}{r} 1 \quad \text{ml} \\ 2 \overline{) 116 \quad 562} \quad 58 \\ \underline{10} \phantom{00} \phantom{00} \\ 16 \phantom{00} \phantom{00} \\ \underline{16} \phantom{00} \\ 00 \end{array} \quad \begin{array}{r} \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \end{array} \quad \begin{array}{r} 2 \overline{) 562} \quad 281 \\ \underline{4} \phantom{00} \\ 16 \phantom{00} \\ \underline{16} \phantom{00} \\ 2 \phantom{00} \\ \underline{2} \phantom{00} \\ 0 \end{array} \end{array}$$

$$\begin{array}{r} 58 \overline{) 281} \text{ ml} \\ \underline{58} \phantom{00} \\ 121 \phantom{00} \\ \underline{116} \phantom{00} \\ 51 \phantom{00} \\ \underline{46} \phantom{00} \\ 51 \phantom{00} \\ \underline{46} \phantom{00} \\ 5 \end{array}$$

$$\begin{array}{r} \text{(b)} \quad \begin{array}{r} 1 \quad \text{ml} \\ 4 \overline{) 456 \quad 48} \quad 114 \\ \underline{4} \phantom{00} \phantom{00} \\ 5 \phantom{00} \phantom{00} \\ \underline{5} \phantom{00} \\ 16 \phantom{00} \phantom{00} \\ \underline{16} \phantom{00} \\ 00 \end{array} \quad \begin{array}{r} \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \end{array} \quad \begin{array}{r} 4 \overline{) 48} \quad 12 \\ \underline{4} \phantom{00} \\ 8 \phantom{00} \\ \underline{8} \phantom{00} \\ 0 \end{array} \end{array}$$

$$114 \overline{) 12} \text{ ml}$$

(c) to (f): Do same as above.

### 3. Solve the following words problems:

$$\begin{array}{r} \text{Harish purchase milk} \quad l \quad \text{ml} \\ \text{first shop} = \quad \quad \quad 22 \quad 600 \\ \text{second shop} = \quad \quad \quad 58 \quad 600 \\ \text{third shop} = \quad \quad \quad + \quad 36 \quad 00 \\ \hline \text{Total purchased} = \quad \quad \quad 117 \quad 220 \end{array}$$

### 4. Cow gives milk $l \quad \text{ml}$

$$\begin{array}{r} \text{in morning} = \quad \quad \quad 25 \quad 336 \\ \text{in evening} = \quad \quad \quad + \quad 36 \quad 000 \\ \hline \text{Total milk} = \quad \quad \quad 61 \quad 336 \end{array}$$

### 5. Naresh purchased diesel $l \quad \text{ml}$

$$\begin{array}{r} \text{in morning} = \quad \quad \quad 26 \quad 00 \\ \text{In evening he found} = \quad \quad \quad + \quad 4 \quad 250 \\ \hline \text{He consumed diesel} = \quad \quad \quad 21 \quad 720 \end{array}$$

$l \quad \text{ml}$

### 6. The milkman has milk = 65 600

$$\text{He old milk} = \quad \quad \quad - \quad 48 \quad 750$$

$$\text{Left the milk} = \quad \quad \quad \underline{16 \quad 850}$$

### 7. A tin contains of oil $l \quad \text{ml}$

$$25 \quad 600$$

$$\times 9$$

$$\text{In 9 tin oil} = \quad \quad \quad \underline{2 \quad 3 \quad 0 \quad 4 \quad 0 \quad 0}$$

### 8. One day consumes $l \quad \text{ml}$

$$\text{petrol in one day} = \quad \quad \quad 3 \quad 150$$

$$8 \text{ days consumer} = \quad \quad \quad \times 8$$

$$\underline{2 \quad 5 \quad 2 \quad 0 \quad 0}$$

### 9. Total milk = 30 l 350 ml

Distributes in 5 people

Each person get milk  $30 \text{ l } 350 \text{ ml} \div 5$

$$\begin{array}{r} \begin{array}{r} 1 \quad \text{ml} \\ 5 \overline{) 30 \quad 350} \quad 6 \\ \underline{30} \phantom{00} \phantom{00} \\ 00 \end{array} \quad \begin{array}{r} \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \end{array} \quad \begin{array}{r} 5 \overline{) 350} \quad 70 \\ \underline{35} \phantom{00} \\ 0 \phantom{00} \\ \underline{0} \phantom{00} \\ 0 \end{array} \end{array}$$

Each person get milk = 6 l 70 ml

### 10. The milkman had 26 l 682 ml

He poured in equally in 2 buckets

In one buckets =  $26 \text{ l } 682 \text{ ml} \div 2$

$$\begin{array}{r} \begin{array}{r} 1 \quad \text{ml} \\ 2 \overline{) 26 \quad 682} \quad 13 \\ \underline{26} \phantom{00} \phantom{00} \\ 0 \phantom{00} \phantom{00} \\ \underline{0} \phantom{00} \\ 68 \phantom{00} \phantom{00} \\ \underline{68} \phantom{00} \\ 00 \end{array} \quad \begin{array}{r} \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \\ \phantom{00} \phantom{00} \phantom{00} \end{array} \quad \begin{array}{r} 2 \overline{) 682} \quad 341 \\ \underline{6} \phantom{00} \\ 8 \phantom{00} \\ \underline{8} \phantom{00} \\ 2 \phantom{00} \\ \underline{2} \phantom{00} \\ 0 \phantom{00} \\ \underline{0} \phantom{00} \\ 0 \end{array} \end{array}$$

In one buckets = 13 l 341 ml

**Exercise - 12.1****1. Write the following amounts in words:**

- (a) ₹ 56.05 = Rupees fifty six and five paise  
 (b) ₹ 20.25 = Rupees twenty and twenty five paise  
 (c) ₹ 120.25 = Rupees hundred twenty and twenty five paise  
 (d) ₹ 95.15 = Rupees twenty five and fifteen paise

**2. Write the following amount in figures:**

- (a) rupees 90 and 70 paise – ₹ 90.70 paise  
 (b) Rupees 35 and 20 paise – ₹ 35.20 paise  
 (c) Rupees 19 and 80 paise – ₹ 19.80 paise  
 (d) Rupees 45 and 35 paise – ₹ 45.35 paise

**Exercise - 12.2****1. Convert each of the following in to paise:**

- (a) ₹ 6 = 1 = 100 p  
 $(6 \times 100) = 600$  p  
 (b) ₹ 83.25 =  $(83 \times 100 + 25)$   
 $= (8300 + 25) = 8325$  p  
 (c) ₹ 25.50 =  $(25 \times 100 + 50)$   
 $= (2500 + 50) = 2550$  p  
 (d) ₹ 90.05 =  $(90 \times 100 + 05)$   
 $= (9000 + 05) = 9005$  p  
 (e) ₹ 64.25 =  $(64 \times 100 + 25)$   
 $= (6400 + 25) = 6425$  p  
 (f) ₹ 42.80 =  $(42 \times 100 + 80)$   
 $= (4200 + 80) = 4280$  p  
 (g) ₹ 15.00 =  $(15 \times 100)$   
 $= 1500$  p  
 (h) ₹ 200.50 =  $(200 \times 100 + 50)$   
 $= (2000 + 50) = 20050$  p

- (i)  $7.75 = (7 \times 100 + 75)$   
 $= (700 + 75) = 775$  p  
 (j)  $5.55 = (5 \times 100 + 55)$   
 $= 500 + 55 = 555$  p

**2. Convert each of the following in to rupees:**

- ₹ 1 = 100 p  
 (a)  $625$  p =  $(625 \div 100) = ₹ 6.25$  p  
 (b)  $840$  p =  $(840 \div 100) = ₹ 8.40$  p  
 (c)  $400$  p =  $(400 \div 100) = ₹ 4$  p  
 (d)  $2625$  p =  $(2625 \div 100) = ₹ 26.25$  p  
 (e)  $225$  p =  $(225 \div 100) = ₹ 2.25$  p  
 (f)  $3025$  p =  $(3025 \div 100)$   
 $= ₹ 30.25$  p  
 (g)  $6000$  p =  $(6000 \div 100) = ₹ 60$  p  
 (h)  $6555$  p =  $(6555 \div 100)$   
 $= ₹ 65.55$  p  
 (i)  $2005$  p =  $(2005 \div 100)$   
 $= ₹ 20.05$  p  
 (j)  $2205$  p =  $(2205 \div 100)$   
 $= ₹ 22.05$  p

**Exercise - 12.3****1. Add the following:**

- |     |            |           |     |            |           |
|-----|------------|-----------|-----|------------|-----------|
| (a) | ₹          | P         | (b) | ₹          | P         |
|     | 65         | 60        |     | 226        | 06        |
|     | + 36       | 26        |     | + 58       | 66        |
|     | <u>101</u> | <u>86</u> |     | <u>284</u> | <u>72</u> |
- 
- |     |            |           |     |            |           |
|-----|------------|-----------|-----|------------|-----------|
| (c) | ₹          | P         | (d) | ₹          | P         |
|     | 660        | 36        |     | 56         | 3         |
|     | + 256      | 26        |     |            | 6         |
|     | <u>916</u> | <u>62</u> |     | + 58       | 26        |
|     |            |           |     | <u>115</u> | <u>10</u> |
- 
- |     |            |           |     |             |           |
|-----|------------|-----------|-----|-------------|-----------|
| (e) | ₹          | P         | (f) | ₹           | P         |
|     | 220        | 36        |     | 566         | 66        |
|     | 69         | 60        |     | 326         | 70        |
|     | + 50       | 36        |     | + 590       | 39        |
|     | <u>340</u> | <u>32</u> |     | <u>1483</u> | <u>75</u> |

|                |            |              |            |
|----------------|------------|--------------|------------|
| (g) ₹          | P          | (h) ₹        | P          |
| 4 7 6 0        | 3 6        | 8 8 6        | 3 6        |
| 8 3 6          | 6 0        | 3 6          | 6 0        |
| + 2 5 6        | 3 7        | + 6          | 3 6        |
| <u>5 8 5 3</u> | <u>3 3</u> | <u>9 2 9</u> | <u>6 6</u> |

## 2. Arrange in column and add:

|              |            |            |            |
|--------------|------------|------------|------------|
| (a) ₹        | P          | (b) ₹      | P          |
| 2 3 6        | 6 0        | 2 7        | 3 6        |
| 5 3          | 3 6        | 2 9        | 6 0        |
| + 3 8        | 6 0        | + 3 0      | 0 0        |
| <u>3 2 8</u> | <u>5 6</u> | <u>8 6</u> | <u>9 6</u> |

|       |     |         |     |
|-------|-----|---------|-----|
| (c) ₹ | P   | (d) ₹   | P   |
| 0 0   | 6 0 | 3 4 3 6 | 0 0 |
| 3 3   | 3 6 | 2 5 0 6 | 0 0 |
| + 0 0 | 3 6 | +       | 6 0 |
| 3 4   | 3 2 | 5 9 9 6 | 6 0 |

### Exercise - 12.4

Solve the following word problems:

1. Cycle purchased = ₹ 1 1 3 5  
 repair spend = ₹ 1 1 5  
 Total cost = ₹ 1 2 5 0

2. IV books = ₹ 9 7 9.  
 Stationary cost = 5 7 4 . 5 0  
 Transportation = 4 5 0 . 0 0  
2 0 0 3 . 5 0

3. Opened the Account with deposit

|                |             |           |
|----------------|-------------|-----------|
| First month =  | 600         | 00        |
| Next month =   | 705         | 50        |
| Total amount = | + 825       | 75        |
|                | <u>2130</u> | <u>75</u> |

4. (a) ₹ P  
 Bread = 1 5 5 0  
 Pasta = 1 8 2 5  
 Biscuit = 1 0 0 0  
 Total = 4 3 7 5

|           |                |
|-----------|----------------|
| (b) ₹     | P              |
| Kurkure = | 2 0 0 0        |
| Chips =   | 1 0 0 0        |
| Maggi =   | 2 7 2 5        |
| Total =   | <u>5 7 2 5</u> |

|            |                  |
|------------|------------------|
| (c) ₹      | P                |
| Bread =    | 1 5 5 0          |
| Biscuits = | 1 0 0 0          |
| Kurkure =  | 2 0 0 0          |
| Chips =    | 1 0 0 0          |
| Maggi =    | 2 7 2 5          |
| Pasta =    | 1 8 2 5          |
| Total =    | <u>1 0 1 0 8</u> |

### Exercise - 12.5

#### 1. Subtract:

|              |            |              |            |
|--------------|------------|--------------|------------|
| (a) ₹        | P          | (b) ₹        | P          |
| 2 0 0        | 0 0        | 6 5 6        | 2 6        |
| - 3 2        | 8 6        | - 3 2 0      | 1 5        |
| <u>1 6 7</u> | <u>1 4</u> | <u>3 3 6</u> | <u>1 1</u> |

|              |            |            |            |
|--------------|------------|------------|------------|
| (c) ₹        | P          | (d) ₹      | P          |
| 4 4 3        | 3 5        | 8 0        | 0 0        |
| - 3 2        | 3 6        | - 2 5      | 1 5        |
| <u>4 1 0</u> | <u>9 9</u> | <u>5 4</u> | <u>8 5</u> |

|                |            |              |            |
|----------------|------------|--------------|------------|
| (e) ₹          | P          | (f) ₹        | P          |
| 2 0 0 0        | 0 0        | 8 3 2        | 4 3        |
| - 9 9 9        | 8 6        | - 5 8 9      | 3 4        |
| <u>1 0 0 0</u> | <u>1 4</u> | <u>1 4 3</u> | <u>0 9</u> |

|              |            |              |            |
|--------------|------------|--------------|------------|
| (g) ₹        | P          | (h) ₹        | P          |
| 3 3 3        | 3 3        | 2 6 9        | 5 0        |
| - 8 4        | 4 4        | - 5 2        | 9 0        |
| <u>2 4 8</u> | <u>8 9</u> | <u>2 1 6</u> | <u>6 0</u> |

#### 2. Arrange in column and subtract:

|          |            |              |            |
|----------|------------|--------------|------------|
| (c) ₹    | P          | (d) ₹        | P          |
| 2 2 6    | 0 0        | 2 0 0        | 5 0        |
| - 2 2 5  | 9 0        | - 7 3        | 8 9        |
| <u>0</u> | <u>1 0</u> | <u>1 2 6</u> | <u>6 1</u> |

$$\begin{array}{r}
 \text{(c) ₹ P} \\
 226 \ 00 \\
 - 225 \ 90 \\
 \hline
 0 \ 10
 \end{array}
 \quad
 \begin{array}{r}
 \text{(d) ₹ P} \\
 200 \ 50 \\
 - 73 \ 89 \\
 \hline
 126 \ 61
 \end{array}$$

### 3. Find the difference between:

$$\begin{array}{r}
 \text{(a) ₹ P} \\
 89 \ 05 \\
 - 52 \ 10 \\
 \hline
 36 \ 95
 \end{array}
 \quad
 \begin{array}{r}
 \text{(b) ₹ P} \\
 759 \ 00 \\
 - 656 \ 50 \\
 \hline
 102 \ 50
 \end{array}$$

$$\begin{array}{r}
 \text{(c) ₹ P} \\
 876 \ 86 \\
 - 39 \ 00 \\
 \hline
 837 \ 86
 \end{array}
 \quad
 \begin{array}{r}
 \text{(d) ₹ P} \\
 82 \ 05 \\
 - 54 \ 80 \\
 \hline
 27 \ 25
 \end{array}$$

### Exercise - 12.6

1. Raj has amount = 660.50

Rahul has amount 836.25

$$\begin{array}{r}
 ₹ \quad P \\
 836 \ 25 \\
 - 660 \ 50 \\
 \hline
 175 \ 75
 \end{array}$$

2. Cost of book = 793 50

Rajesh has = 600 75

He pay more = 192 75

₹ P

3. Aditi had 353 25

Purchased stationery – 243 75

She much money left 109 50

4. Books – 692 15

School bag – 431 30

Water bottle – 125 25

Total 1427 20

His given to shopkeeper 1500.00

Purchased 1427.20

72.80

₹ P

5. Both have collected = 893 25

Tanu has contributed = 458 75

Parul contributed = 434 50

### Exercise 12.7

#### 1. Multiple the following:

$$\begin{array}{r}
 \text{(a) } 6356 \\
 \times 3 \\
 \hline
 19068
 \end{array}
 \quad
 \begin{array}{r}
 \text{(b) } 8605 \\
 \times 5 \\
 \hline
 34420
 \end{array}$$

$$\begin{array}{r}
 \text{(c) } 23865 \\
 \times 5 \\
 \hline
 119325
 \end{array}
 \quad
 \begin{array}{r}
 \text{(d) } 33686 \\
 \times 2 \\
 \hline
 67372
 \end{array}$$

$$\begin{array}{r}
 \text{(e) } 58896 \\
 \times 8 \\
 \hline
 471168
 \end{array}
 \quad
 \begin{array}{r}
 \text{(f) } 25820 \\
 \times 7 \\
 \hline
 369740
 \end{array}$$

$$\begin{array}{r}
 \text{(g) } 60060 \\
 \times 6 \\
 \hline
 360360
 \end{array}
 \quad
 \begin{array}{r}
 \text{(h) } 89298 \\
 \times 9 \\
 \hline
 803682
 \end{array}$$

#### 2. Arrange in column and multiply:

$$\begin{array}{r}
 \text{(a) } 856 \\
 \times 9 \\
 \hline
 76554
 \end{array}
 \quad
 \begin{array}{r}
 \text{(b) } 23656 \\
 \times 8 \\
 \hline
 189248
 \end{array}$$

$$\begin{array}{r}
 \text{(c) } 8304 \\
 \times 7 \\
 \hline
 58128
 \end{array}
 \quad
 \begin{array}{r}
 \text{(d) } 33670 \\
 \times 6 \\
 \hline
 202020
 \end{array}$$

### Exercise 12.8

#### Solve the following:

1. Cost of book 28 22

Cost of 8 book  $\times 8$

225 76

2. Cost of 1 liter of milk = 78 34

Cost of 9 liter milk =  $\times 9$

705 06

3. Cost of a gas cylinder is 331 . 50

$\times 7$

Cost of 7 gas cylinder 2320 . 50

4. 2 liter Limca bottle is = 76 86

$\times 8$

8 Limca bottle 614 88



$$9 \text{ min} = 9 \times 60 \\ = 540 \text{ sec} + 25 \text{ sec} = 565 \text{ sec}$$

4. (a)  $24 \text{ hours} = 1 \text{ day}$   
 $28 \text{ hours} = 28 \div 24$   
 $= 1 \text{ day } 4 \text{ hours}$

$$\begin{array}{r} 24 \overline{)28} 1 \\ \underline{24} \\ 4 \end{array}$$

(b) to (f): Do same as above.

5. (a)  $60 \text{ min} = 1 \text{ sec}$   
 $850 \text{ min} = 850 \div 60$   
 $= 14 \text{ hours } 10 \text{ min}$

$$\begin{array}{r} 60 \overline{)850} 14 \\ \underline{72} \\ 250 \\ \underline{240} \\ 10 \end{array}$$

(b) to (f): Do same as above.

6. (a)  $1 \text{ sec} = 1/60 \text{ min}$   
 $985 \text{ sec} = 985 \div 60 \text{ min}$   
 $= 16 \text{ min } 25 \text{ sec}$

$$\begin{array}{r} 60 \overline{)985} 16 \\ \underline{60} \\ 385 \\ \underline{360} \\ 25 \end{array}$$

(b) to (f): Do same as above.

### Exercise - 13.3

1. (a) 

| days                  | hours      |
|-----------------------|------------|
| 2 6                   | 2 6        |
| + 8                   | 1 9        |
| <u>3 4</u>            | <u>4 5</u> |
| 34 days               | 45 hours   |
| + 24 hours            | -24 hours  |
| 1 day = 24 hours      |            |
| = 34 days + 1 day     |            |
| = 45 hours - 24 hours |            |
| = 35 days 21 =hours   |            |

- (b) 

| days             | hours      |
|------------------|------------|
| 2 3              | 3 0        |
| + 2 6            | 2 8        |
| <u>4 9</u>       | <u>5 8</u> |
| 49 days          | 58 hours   |
| + 24 hours       | -24 hours  |
| 1 day = 24 hours |            |

$$= 49 \text{ days} + 1 \text{ day} \\ = 58 \text{ hours} - 24 \text{ hours} \\ = 50 \text{ days } 34 \text{ =hours}$$

Now again

$$\begin{array}{r} 50 \text{ days} \quad 34 \text{ hours} \\ + 24 \text{ hours} \quad - 24 \text{ hours} \\ \hline 51 \text{ days } 10 \text{ hours} \end{array}$$

(c) Do same as above.

2. (a) 

| hours      | min        |
|------------|------------|
| 2 0        | 5 0        |
| + 8        | 2 6        |
| <u>2 8</u> | <u>7 6</u> |

$$\begin{array}{r} 28 \text{ hours} \quad 76 \text{ min} \\ + 60 \text{ min} \quad - 60 \text{ min} \\ \hline 29 \text{ hours } 16 \text{ min} \end{array}$$

- (b) 

| hours           | min        |
|-----------------|------------|
| 2 8             | 3 6        |
| + 6             | 5 8        |
| <u>3 4</u>      | <u>9 4</u> |
| 34 hours        | 94 min     |
| + 60 min        | - 60 min   |
| 35 hours 34 min |            |

- (c) 

| hours      | min        |
|------------|------------|
| 2 0        | 5 0        |
| + 2 6      | 8 6        |
| <u>3 7</u> | <u>3 6</u> |

3. (a) 

| min          | sec        |
|--------------|------------|
| 5 6          | 3 9        |
| + 2 4        | 2 6        |
| <u>8 0</u>   | <u>6 5</u> |
| 80 min       | 65 sec     |
| + 60 sec     | - 60 sec   |
| 81 min 5 sec |            |

$$\begin{array}{r}
 \text{(b)} \quad \begin{array}{r} \text{min} \quad \text{sec} \\ 69 \quad 32 \\ + 27 \quad 59 \\ \hline 96 \quad 91 \\ 96 \text{ min} \quad 91 \text{ sec} \\ + 60 \text{ sec} \quad - 60 \text{ sec} \\ \hline 97 \text{ min} \quad 31 \text{ sec} \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{(c)} \quad \begin{array}{r} \text{min} \quad \text{sec} \\ 78 \quad 32 \\ + 87 \quad 59 \\ \hline 166 \quad 152 \\ 196 \text{ min} \quad 152 \text{ sec} \\ + 120 \text{ sec} \quad - 120 \text{ sec} \\ \hline 167 \text{ min} \quad 32 \text{ sec} \end{array}
 \end{array}$$

$$\begin{array}{r}
 \text{4. (a)} \quad \begin{array}{r} \text{days} \quad \text{hrs} \\ 26 \quad 14 \\ - 20 \quad 12 \\ \hline 6 \quad 02 \end{array} \\
 6 \text{ days} \quad 2 \text{ hours}
 \end{array}$$

(b) and (c): Do same as above.

$$\begin{array}{r}
 \text{5. (a)} \quad \begin{array}{r} \text{hours} \quad \text{min} \\ 29 \quad 56 \\ - 23 \quad 34 \\ \hline 6 \quad 22 \end{array} \\
 6 \text{ hours} \quad 22 \text{ min}
 \end{array}$$

(b) and (c): Do same as above.

$$\begin{array}{r}
 \text{6. (a)} \quad \begin{array}{r} \text{min} \quad \text{sec} \\ 38 \quad 50 \\ - 26 \quad 32 \\ \hline 12 \quad 18 \\ 12 \text{ min} \quad 18 \text{ sec} \end{array}
 \end{array}$$

(b) and (c): Do same as above.

### Exercise - 13.4

- Duration between  
= 7:45 AM to 6:25 PM  
= 7:45 AM – 6:25 PM  
= 1 hours 20 min  
Working

$$\begin{array}{r} \text{hrs} \quad \text{min} \\ 7 \quad 45 \\ - 6 \quad 25 \\ \hline 1 \quad 20 \end{array}$$

- Ending time of school = 2:00 PM  
= 14:00 hrs  
Starting time of school = 8:20 AM = 8:20 hrs

Working hrs of school = 14:00 hrs  
– 8:20 hrs

$$\begin{array}{r} \text{Working} = 5:80 \text{ hrs} \\ \begin{array}{r} \text{hrs} \quad \text{min} \\ 14 : 00 \\ - 8 : 20 \\ \hline 5 : 80 \end{array} \end{array}$$

Thus, working hrs of school  
5 hrs 80 min  
+ 60 min – 60 min  
6 hrs 20 min

- A train leave Sitapur at  
= 1:20 PM  
Reaches Meerut = 10:30 PM  
Duration of the journey  
= 1:20 hrs – 10:30 hrs  
= 10:30 – 1:20 = 9 hrs 10 min

- A train leaves Meerut at  
= 8:15 PM = 20:15 min  
Reaches Sultanpur  
= 7:20 AM = 7:20 hrs  
Duration of journey  
= 20:15 hrs – 7:20 hrs  
= 13 hrs : 95 min  
+ 60 min – 60 min  
14 hrs : 35 min  
Working

$$\begin{array}{r} \text{hrs} \quad \text{min} \\ 20 : 00 \\ - 7 : 20 \\ \hline 13 : 80 \end{array}$$

- Today's date = 7-12-2018  
Your birthday = 14-07-1992  
Age = 14-07-1992 – 7-12-2018  
= 26 years  
After ten years your age  
= 26 + 10 = 36 years
- (a) 7 hrs 40 min 5 sec  
(b) 7 hrs 0 min 5 sec

$$\begin{array}{r} \text{years} \quad \text{month} \\ 20 \quad 9 \\ - 17 \quad 0 \\ \hline 3 \quad 9 \end{array}$$

3 years 9 month

- 6:20 PM

- 1 years

## Chapter - 14

### Exercise - 14.1

1. (a) Average =  $\frac{\text{Sum of all observation}}{\text{Number of observation}} = \frac{8+4+5+6+7}{5} = \frac{30}{5} = 6$   
 (b) Average =  $\frac{\text{Sum of all observation}}{\text{Number of observation}} = \frac{7+14+21+28+35}{5} = \frac{105}{5} = 21$   
 (c) Average =  $\frac{\text{Sum of all observation}}{\text{Number of observation}} = \frac{1+3+5+7+9+11+13+15+17+19}{10} = \frac{100}{10} = 10$   
 (d) Average =  $\frac{\text{Sum of all observation}}{\text{Number of observation}} = \frac{61+62+63+64+65+66+67+68+69+70}{10} = \frac{105}{5} = \frac{585}{10} = 65$
2. Average score per batsman =  $\frac{\text{Num of all observation}}{\text{Number of observation}} = \frac{25+31+61+0+43+29+5+35+33+60+80}{11} = \frac{402}{11} = 36.54$
3. Average of 4 student =  $\frac{21+27+24+30}{4} = \frac{102}{4} = 25.5 \text{ kg}$
4. Average of 10 even number =  $\frac{2+4+6+8+10+12+14+16+18+20}{10} = \frac{110}{10} = 11$
5. Average of 10 prime number =  $\frac{2+3+5+7+11+13+17+19+23+27}{10} = \frac{127}{10} = 12.7 \text{ kg}$
6. Average length of piece  
 $= \frac{15\text{m } 20\text{cm} + 21\text{m } 65\text{cm} + 19\text{m } 15\text{cm} + 30\text{m } 15\text{cm} + 16\text{m } 75\text{cm}}{5}$   
 $= \frac{102 \text{ m } 9 \text{ cm}}{5} = 20 \text{ m } 58 \text{ cm}$
7.  $\frac{9+18+27+36+45+54+63+72+81}{9} = \frac{405}{9} = 45$
8. Average score of per subject =  $\frac{\text{Sum of marks of all sub}}{\text{No of marks}} = \frac{84+82+80+88+94}{5} = \frac{428}{5} = 85.6$

$$\begin{aligned}
 9. \text{ Average age of per girl} &= \frac{\text{Sum of age of girl}}{\text{No of girl}} \\
 &= \frac{+ 21 \text{ years 6 month} + 12 \text{ years 6 month} + 14 \text{ years 6 month}}{5} \\
 &= \frac{13 \text{ years 4 month} + 11 \text{ years 2 months}}{5} \\
 &= \frac{73 \text{ years 4 months}}{5} = 14 \text{ years 6 months}
 \end{aligned}$$

$$10. \text{ Average earning per month} = \frac{\text{Sum of earning of 3 months}}{3}$$

$$11. \text{ Average of 8 number} = \frac{\text{Sum of all numbers}}{\text{No}} = 10 = \frac{x}{8} x = 10 \times 8$$

$$\text{Average of 8 no is} = 80$$

$$12. \text{ Average} = \frac{\text{Sum}}{\text{Observation}} = \frac{16}{1} \times \frac{160}{x} = 16x = 160$$

$$x = \frac{160}{16} = 10 \quad x = 10$$

$$13. \text{ No of observation} = 10$$

$$= \frac{201+202+203+204+205+206+207+208+209}{9} = \frac{18.45}{9} = 25$$

$$14. = \frac{0+1+2+3+4+5+6+7+8+9}{10} = \frac{45}{10} = 4.5$$

$$15. 40 = \frac{20+30+40+x}{4} = 40 \times 4 = 90 + x \quad = 160 - 90 = x \quad = x = 70$$

#### Exercise - 14.2

$$1. (a) \frac{55}{100} = \frac{11}{20} (b) \frac{45}{100} = \frac{9}{20} (c) \frac{65}{100} = \frac{13}{20} (d) \frac{90}{100} = \frac{9}{10} (e) \frac{6\frac{1}{2}}{100} = \frac{13}{2 \times 100} = \frac{13}{200}$$

$$(f) \frac{85}{100} = \frac{17}{20} (g) \frac{18\frac{1}{4}}{100} = \frac{73}{400} = \frac{73}{4 \times 100} = \frac{73}{400} (h) \frac{26\frac{1}{8}}{100} = \frac{209}{100}$$

$$(i) \frac{425}{10 \times 100} = \frac{425}{1000} = \frac{85}{200} = \frac{17}{40} (j) \frac{268}{100 \times 10} = \frac{268}{1000} = \frac{134}{500} = \frac{67}{250}$$

$$2. (a) \frac{62}{100} = 0.62 (b) \frac{50}{100} = 0.5 (c) \frac{85}{100} = 0.85 (d) \frac{8}{100} = 0.08 (e) \frac{25}{100} = 0.25$$

$$(f) \frac{22.4}{10 \times 100} = 0.224 (g) \frac{358}{100 \times 10} = 0.358 (h) \frac{11}{2} = \frac{11}{2 \times 100} = \frac{5.5}{100} = 0.055$$

$$(i) 0.171 (j) 0.184$$

$$3. (a) \frac{0.5}{100} \times 100 = 50\% (b) \frac{0.13}{100} \times 100 = 13\% (c) \frac{0.76}{100} \times 100 = 76\%$$

$$(d) \frac{2.6}{10} \times 100 = 260\% (e) \frac{2.02}{100} \times 100 = 202\% (f) \frac{5.2}{10} \times 100 = 520\%$$

- (g)  $\frac{0.006}{1000} \times 100 = 0.6\%$
- (h)  $\frac{725}{100} \times 100 = 725\%$
- (i)  $\frac{313}{100} \times 100 = 313\%$
- (j)  $\frac{8.5}{10} \times 100 = 850\%$
4. (a)  $\frac{35}{100} \times 100 = 35\%$
- (b)  $\frac{55}{25} \times 100 = 220\%$
- (c)  $\frac{8}{10} \times 100 = 80\%$
- (d)  $\frac{8}{9} \times 100 = \frac{800}{9} = 88.8\%$
- (e)  $\frac{6}{8} \times 100 = \frac{600}{8} = 74.9\%$
- (f)  $3 \frac{4}{12} \times 100 = \frac{40}{12} \times 100$   
 $= \frac{4000}{12} = 333.33\%$
- (g)  $\frac{18}{10} \times 100 = 180\%$
- (h)  $\frac{60}{10} \times 100 = 600\%$
- (i)  $6 \frac{7}{9} \times 100 = \frac{6100}{9} = 677.78\%$
- (j)  $4 \frac{2}{2} \times 100 = \frac{10}{2} \times 100 = 500\%$
5. (a)  $\frac{35 \times 100}{100} = 35$  (b)  $\frac{5 \times 200}{100} = 10$
- (c)  $\frac{55 \times 300}{100} = 165$
- (d)  $\frac{40 \times 100}{100} = 40$  (e)  $\frac{3 \times 12}{100} = \frac{9}{25}$
- (f)  $\frac{20 \times 180}{100} = 36$  (g)  $\frac{8 \frac{2}{5} \times 900}{100}$   
 $= \frac{18}{5} \times 9 = 75.6$
6. (a)  $\frac{35 \times 300}{100} = ₹ 105$
- (b)  $\frac{40 \times 2}{100} = 0.4 \text{ kg}$
- (c)  $\frac{25 \times 850}{100} = \frac{415}{2} = 212.5 \text{ ml}$
- (d)  $\frac{38 \times 3}{100} = 11.4 \text{ ml}$
- (e)  $\frac{36 \times 1}{100} = 0.36$  (f)  $\frac{24 \times 1}{100} = 0.24$
- (g)  $\frac{12 \times 6}{5 \times 100} = \frac{72}{5 \times 100} = 14.5$
- (h)  $\frac{10 \times 2}{100} = 0.1$
7. (a)  $\frac{x \times 100}{100} = 100 \quad x = 100$
- (b)  $\frac{x \times 2}{100} = 500$   
 $x = \frac{500 \times 100}{2} = 25,000$
- (c)  $\frac{x \times 1}{100} = 600$   
 $x = 600 \times 100 \quad x = 60,000$
- (d)  $\frac{x \times 1000}{100} = 200$   
 $x = \frac{200 \times 100}{1000} \quad x = 20$
- (e)  $\frac{75 \times x}{100} = 300$   
 $x = \frac{300 \times 100}{75} \quad x = 400$
- (f)  $\frac{x \times 50}{100} = 5 \quad x = \frac{5 \times 100}{50} \quad x = 10$
- (g)  $\frac{20 \times x}{100} = 250$   
 $20 \times x = 250 \times 100$   
 $20x = 25,000 \quad x = \frac{2500}{20}$   
 $x = 1250$
- (h)  $\frac{60 \times x}{100} = 480 \quad x = \frac{4800}{60} = 80$

8. Marks scored by Mahesh = 550

Total marks = 600

$$= \frac{550}{600} \times 100 = 91.67\%$$

9. Total number of student = 70

Let the no of girls be  $x$

80% of 70 -  $x = 70$

$$= \frac{80 \times 70}{100} - x = 70$$

$$= 56 - x = 70 \quad x = 70 - 56$$

$$x = 14$$

So, the number of girls are = 14

Number of boys = 70 - 14 = 56

10. Earning of Mr Gupta = ₹6000

Let she spend money be  $x$

50% of 6000 -  $x = 6000$

$$= \frac{50 \times 6000}{100} - x = 6000$$

$$= x = 6000 - 3000 \quad x = 3000$$

So, she saves money 6000 - 3000

= ₹ 3000

| 11. Subject | M.M          | M.O          |
|-------------|--------------|--------------|
| Hindi       | 200          | 180          |
| English     | 150          | 145          |
| Maths       | 150          | 142          |
| Science     | 200          | 195          |
| G.K         | 100          | 90           |
| Drawing     | 150          | 123          |
| S.S.T       | 150          | 134          |
|             | <u>1,100</u> | <u>1,009</u> |

$$\% = \frac{\text{M.O}}{\text{M.M}} \times 100$$

$$= \frac{1,009}{1,100} \times 100 = 91.72\%$$

12. a → 4, b → 3, c → 2, d → 1

## Chapter - 15

### Exercise - 15.1

1. (a) Next number = Previous number + 2  
(b) Next number = Previous number + 4

(c) Next number = Previous number - 2

(d) Next number = Previous number - 10

(e) Next number = Previous number × 2

(f) Next number = Previous number - 5

2. (a) 20, 18, 16, 14, 12, 10, 8, 6, 4, 2

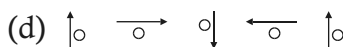
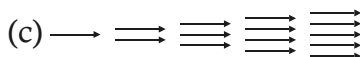
(b) 1, 3, 7, 15, 21, 63, 127, 255, 511, 1023 (Number × 2 + 1)

(c) 1, 4, 9, 16, 25, 36, 49, 64, 81, 100 (Number × Number)

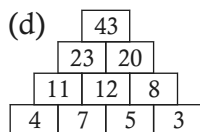
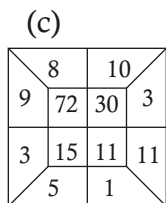
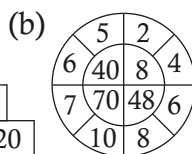
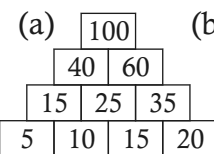
(d) 30, 35, 40, 45, (Number + 5)

(e) 1000, 900, 800, 700, 600, 500  
400, 300, 200, 100

- 3.



- 4.



5. (a) 50 (b) 5 (c) 10 (d) 4 (e) 40 (f) 11

6. (a)  $2 + 3 = 5$

$20 + 30 = 50$

$200 + 300 = 500$

$2000 + 3000 = 5000$

$20000 + 30000 = 50000$

(b)

|   |   |   |    |    |
|---|---|---|----|----|
| x | 1 | 2 | 3  | 4  |
| 1 | 2 | 2 | 3  | 4  |
| 2 | 3 | 4 | 6  | 8  |
| 3 | 4 | 6 | 9  | 12 |
| 4 | 5 | 8 | 12 | 16 |

(c)

|   |   |   |   |   |
|---|---|---|---|---|
| + | 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 | 5 |
| 2 | 3 | 4 | 5 | 6 |
| 3 | 4 | 5 | 6 | 7 |
| 4 | 5 | 6 | 7 | 8 |

(d)

|   |   |   |    |    |
|---|---|---|----|----|
| x | 1 | 2 | 3  | 9  |
| 1 | 2 | 3 | 4  | 5  |
| 2 | 3 | 5 | 7  | 9  |
| 3 | 4 | 7 | 10 | 13 |
| 4 | 5 | 9 | 13 | 17 |

### Exercise 15.2

1. (a) 2 15 15 11 (b) 16 05 14 03 09 12

(c) 05 18 01 19 05 18 (d) 16 18 09

14 03 09 12 (e) 06 18 09 05 14 04

(f) 03 08 01 09 18 (g) 20 01 02 11

05 (h) 15 60 06 09 03 05

2. (a) 07 15 01 08 05 01 04 (b) 08 01

18 04 23 15 18 11 09 19 11 05 25

15 06 19 21 03 03 05 19 19

3. (a) HONESTY IS THE BEST

POLICY

(b) BOOKS ARE TRUE FRIEND

4. (a)

## Chapter - 16

### Exercise 16.1

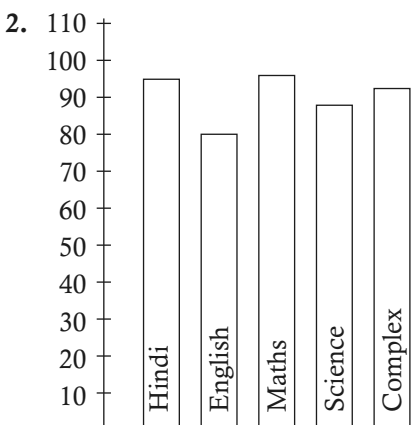
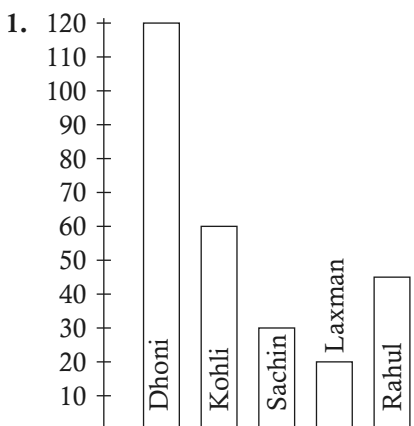
1.

| Game        | 1 ☺ = 10 students |
|-------------|-------------------|
| Basket Ball | ☺ ☺ ☺ ☺ ☺ ☺ ☺     |
| Football    | ☺ ☺ ☺ ☺ ☺ ☺ ☺     |
| Badminton   | ☺ ☺ ☺ ☺ ☺         |
| Tennis      | ☺ ☺ ☺ ☺           |
| Hockey      | ☺ ☺ ☺             |

2.

| Animals  | 1 ☺ = 5 Animals |
|----------|-----------------|
| Lion     | ☺ ☺ ☺ ☺ ☺ ☺ ☺   |
| Tiger    | ☺ ☺ ☺ ☺ ☺       |
| Monkey   | ☺ ☺ ☺ ☺ ☺       |
| Elephant | ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ |
| Deers    | ☺ ☺ ☺ ☺ ☺ ☺ ☺ ☺ |
| Horse    | ☺ ☺ ☺ ☺ ☺ ☺     |

### Exercise - 16.2



3. Number of students of different of a school:

(a) Class vii

(b) Class viii

(d) 790

(d) 800 (e) 159